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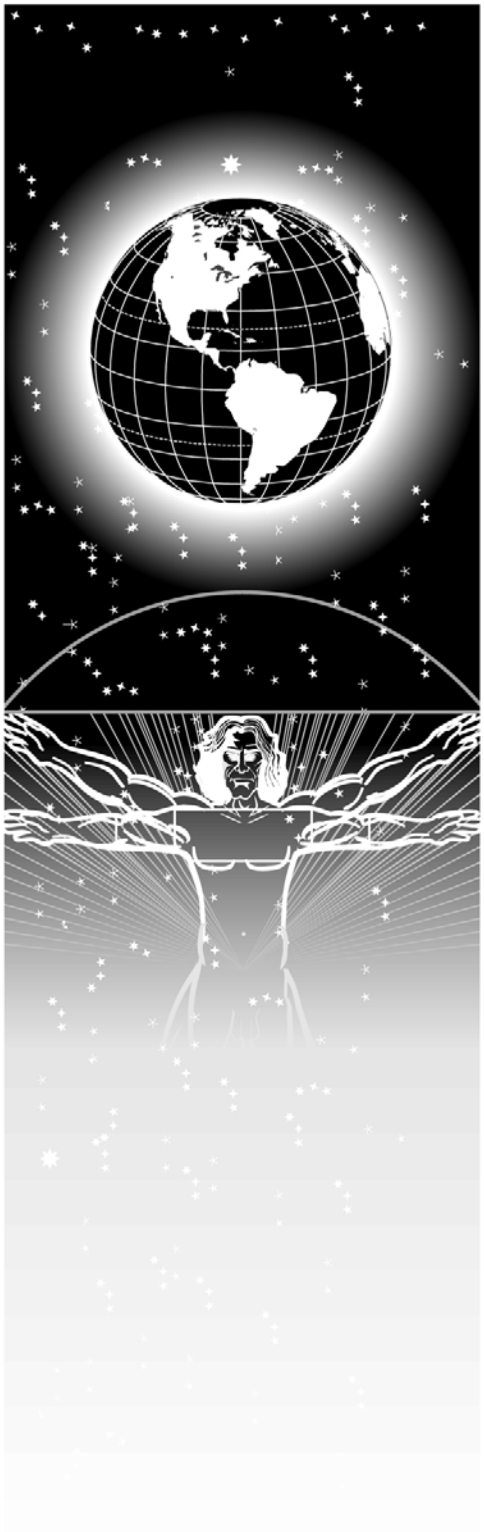

UNITED STATES AIR FORCE
311th Human Systems Wing

An Assessment of Thermal Stress Effects on Flight Mishaps that Involve Pilot Human Factors

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February 2007

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14. ABSTRACT
In recent years, the designers of the newest DoD fighter aircraft, such as the F-35 and the F-22, have examined the feasibility of new physiological equipment for the pilots such as the full-coverage, temperature-regulated G-suits. A question was posed as to whether there was a correlation between extreme temperatures and current mishap rates in legacy fighters, thereby giving a base-line for the newer fighters to compare their performance. This study was completed to determine if a correlation existed between extreme air temperatures at home station and fighter mishaps involving pilot human factors. The study was completed in 2006, using a comprehensive 10 year review to include the fiscal years 1996-2005. The mishap data were extracted from the internet-based Aviation Safety Automated System (AVSAS). Three aircraft were used in the study, to include 9 F-15C bases, 5 F-15E bases, and 13 F-16C bases. Flying hours were provided by AF/A3OT at the Pentagon as totals per month, per aircraft type, per base. The air temperature data were provided by the Air Force Combat Climatology Center (AFCCC) in Asheville, NC and included the average high temperature and average low temperature for each month at each base. This study found no significant statistical correlation between extreme surface temperatures at home station and the flight mishap rates due to pilot human factors.

15. SUBJECT TERMS
Thermal Stress, Heat Stress, Cold Stress, Aircraft Mishaps, Human Factors, Human Systems Integration

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EXECUTIVE SUMMARY

Thermal stress can be a concern for aircrews exposed to varying ambient temperatures. In recent years, the designers of the newest DoD fighter aircraft, such as the F-22 and the F-35, have examined the feasibility of new physiological equipment for the pilots to better regulate body temperature and comfort. A question was posed as to whether there was a correlation between extreme temperatures and current mishap rates in legacy fighters, thereby giving a baseline for the newer fighters to compare their performance. This study was completed to determine if a correlation existed between extreme air temperatures at home station and fighter mishaps involving pilot human factors.

The study was completed in the spring and summer of 2006, using a comprehensive 10-year review to include the fiscal years 1996-2005. The mishap data were extracted from the internet-based Aviation Safety Automated System (AVSAS) through the Air Force Safety Center and were filtered individually by a safety-trained pilot member to determine whether the mishap qualified for the study. Three aircraft at a variety of bases were used in the study, to include 9 F-15C bases, 5 F-15E bases, and 13 F-16C bases. Flying hours were provided by AF/A3OT at the Pentagon as totals per month, per aircraft type, per base. The air temperature data were provided by the Air Force Combat Climatology Center (AFCCC) in Asheville NC and included the average high temperature and average low temperature for each month at each base.

This study found no significant statistical correlation between extreme surface temperatures at home station and the flight mishap rates due to pilot human factors. In some cases, the plotted data was confounded when the total number of flying hours was relatively low for that period. There are several possible explanations for this lack of detrimental affect. First, the time of exposure to the extreme temperatures might be small enough to avoid having an effect. Second, the pilot's personal equipment may be working properly to mitigate the risks of the extreme temperatures. Third, the pilots may be developing a tolerance to the extreme conditions over time that would minimize their effects. Fourth, other mishap causative factors may be disguising the effects of thermal stress on the mishap rates. Lastly, the Flight Safety offices at each of these bases is extraordinarily proactive in preparing the pilots for the coming extreme weather, giving briefings, disseminating other information, and performing ORM assessments to get the pilots into the proper mindset to deal effectively with the temperatures. This combination of factors most likely leads to the surprising result, that there is no apparent correlation with higher mishap rates and thermal stress due to extreme temperatures.

Based on the results of this study, there are no recommendations at this time.

ACKNOWLEDGEMENTS

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AN ASSESSMENT OF THERMAL STRESS EFFECTS ON FLIGHT MISHAPS THAT INVOLVE PILOT HUMAN FACTORS

INTRODUCTION

Early aviators encountered thermal stressors in some form or another. With the advent of pressurized and environmentally controlled cabin space, air platform habitability was greatly improved. However, thermal stress is not always fully attenuated, especially in hot environments due to "heat soaked" aircraft, lengthy startup/standby procedures and low-altitude flight. Acceptable levels of aircrew thermal stress will vary by individual, task, and required margin of safety, while impaired performance may be observed in others at relatively mild levels of heat strain (Nunnelly, 1996). Alternatively, although "mild" hypothermia can affect memory, judgment, and behavior (Pozos and Danzl, 2001), it is highly unlikely that this level of body heat loss would be observed in otherwise healthy aircrew members.

Attenuation in aircrew cognitive performance is highly undesirable, as it has been noted that human error is regarded as at least a contributing factor in all aviation crashes (Li, et.al, 2001). Therefore, the question has surfaced as to whether there was a relationship between extreme flightline temperatures and recent mishap rates. The purpose of this study was to determine if a correlation existed between surface air temperature at home station and fighter mishaps involving pilot human factors.

METHODS

Study Design

The study was performed in the spring and summer of 2006, using a 10-year span including the fiscal years 1996-2005. The mishap data were extracted from the internet-based Aviation Safety Automated System (AVSAS) through the Air Force Safety Center and were filtered individually by a safety-trained pilot member to determine whether the mishap qualified for the study. Flying hours were provided by AF/A3OT at the Pentagon as totals per month per aircraft type per base. The air temperature data were provided by the Air Force Combat Climatology Center (AFCCC) in Asheville NC and included the average high temperature and average low temperature for each month for each base.

Initially, the study attempted to examine mishap rates for bases with similar missions in the F-15C, F-15E, and F-16C aircraft. These data were analyzed for trends, and then the overall study was expanded to all F-15C, F-15E, and F-16C bases. All classes of flight mishaps were included in the study. Each mishap was individually reviewed for relevance to the study. Mishaps were counted if pilot human factors were involved in the mishap outcome.

Mishaps were then correlated with the corresponding flying hours for that month so a rate could be determined. Then the rate was correlated with the temperature data (both the high surface temperature average and the low surface temperature average for the month). Rates were plotted on a temperature graph to determine any trends.

Data

Flight mishap data were gathered directly from the Air Force Safety Center's Aviation Safety Automated System (AVSAS) website. Temperature data were gathered from the Air Force Combat Climatology Center (AFCCC) in Asheville NC. Flight hours data were gathered from Headquarters Air Force, A3OT department, at the Pentagon.

The mishap inclusion criteria for this study were a U.S. Air Force Class A, B, C, or E mishap occurring during fiscal years 1996-2005, as defined by the Air Force Safety Center. A Class A severity mishap was one in which the total cost of property damage was $1 million or more; a DoD aircraft was destroyed; or an injury and/or occupational illness resulted in a fatality or permanent total disability. A Class B severity mishap resulted in total property damage of $200,000 or more, but less than $1 million; an injury and/or occupational illness resulted in permanent partial disability; or three or more personnel were hospitalized for inpatient care. A Class C severity mishap resulted in total property damage of $20,000 or more, but less than $200,000; a nonfatal injury caused loss of time from work beyond the day or shift on which it occurred; or a nonfatal occupational illness or disability caused loss of time from work or disability at any time.

The following standards were used to determine the applicability of a specific mishap to the study. The mishap had to follow all the standards in order to be included in the study.

- The sortie originated out of home station.
- All classes of mishaps (A, B, C, E) were used.
- The mishap was caused or compounded by pilot error or pilot human factors (maintenance human factors were not counted).
- If a mishap began with a maintenance issue (such as an engine failure), it would not be counted unless the pilot later made an error, such as shutting down the wrong engine, landing gear up unintentionally, landing short, etc.
- If the mishap was a departure from controlled flight, it was not counted if there was a maintenance issue that was causal (such as an aileron out of rig), but it was counted if there was no maintenance issue.
- If the mishap was physiological (smoke or fumes, etc.), it was not counted if the pilot had no ill effects from the exposure and performed the checklist items correctly, but it was counted if the pilot had any ill effects.

The mishaps were sorted by the month and year that they occurred at each location for each airframe. The mishaps were then sorted by the average high surface temperature for that month for that base, using 10 degree increments (below 0 F, 0-10 F, 10-20 F, etc., up to over 100 F). For example, if a mishap occurred in August 1998, and the average high temperature for that month was 85 degrees, then the mishap was placed in the 80-90 F range in the study for that timeframe. The study was then repeated using the average low surface temperature to check for trends. See Appendix 1 for charts of the raw data.

Because the flying hours data were reported in monthly intervals, the only way to analyze the mishap data was to look at each month of each fiscal year. Therefore, an average monthly surface temperature (either high or low) was used in the study. The flying hours were classified in the same way, using the average high temperature (or low temperature) to determine where the flying hours would be placed. The mishap rates for individual bases and aircraft types were determined by dividing the total number of mishaps in a temperature range by the total flying hours in that temperature range. The mishap rates were calculated per 100,000 flying hours. The data were then graphed to find any correlations. See Appendices A, B, and C for tables of the raw data, and Appendices D and E for tables showing some of the analysis.

The initial study was limited to aircraft from bases with similar missions to ensure an apples-to-apples comparison. The authors contacted Headquarters Air Combat Command's Standardization and Evaluation branch for guidance. The aircraft included: F-15C (Elmendorf, Mountain Home, and Eglin), F-15E (Elmendorf, Seymour-Johnson, and Mountain Home), and F-16C (Eielson, Cannon, and Mountain Home). Comparisons were made within weapon systems and also with a combined aircraft mishap rate.

The study was then expanded to include all F-15C, F-15E, and F-16C bases and aircraft. These included the following (deployed locations in Southwest Asia were not included):

- F-15C at Mountain Home AFB, Idaho
- F-15C at Elmendorf AFB, Alaska
- F-15C at Eglin AFB, Florida
- F-15C at Langley AFB, Virginia
- F-15C at Tyndall AFB, Florida
- F-15C at Kadena AB, Okinawa
- F-15C at Nellis AFB, Nevada
- F-15C at RAF Lakenheath, United Kingdom
- F-15C at Spangdahlem AB, Germany

- F-15E at Seymour Johnson AFB, North Carolina
- F-15E at Elmendorf AFB, Alaska
- F-15E at Mountain Home AFB, Idaho
- F-15E at RAF Lakenheath, United Kingdom
- F-15E at Nellis AFB, Nevada

- F-16C at Eielson AFB, Alaska
- F-16C at Mountain Home AFB, Idaho
- F-16C at Cannon AFB, New Mexico
- F-16C at Luke AFB, Arizona
- F-16C at Aviano AB, Italy
- F-16C at Hill AFB, Utah
- F-16C at Kunsan AB, Korea
- F-16C at Misawa AB, Japan
- F-16C at Moody AFB, Georgia
- F-16C at Nellis AFB, Nevada

- F-16C at Osan AB, Korea
- F-16C at Shaw AFB, South Carolina
- F-16C at Spangdahlem AB, Germany

The raw data and some of the analyses are included in the appendices to this report in the event that the reader wishes to perform a similar analysis.

Statistical Analysis

A database was constructed using EXCEL (Microsoft, Redmond, WA). Data were then imported into SAS statistical software, which was further used to analyze all data (SAS 9.1.3 , Cary, North Carolina, USA). Because of the 'Rare Event' nature of this data, several statistical models were employed to assess outcomes. After several evolutions of analysis, it was decided that a Fisher's exact test for comparison of two proportions would be utilized to assess outcomes. In addition, power analysis was conducted to assess the integrity of the outcomes. Proportional analysis was conducted comparing each temperature decade with the control temperature. It was determined that no further cross analyses were required. While the standard proportional analysis can be conducted using a simple Chi Square analysis, Fisher's exact test was employed because expected cell frequencies for events were less than 5.

RESULTS

Average High Temperatures

The data were plotted by individual airframes and also by combining all airframes into one comparison. If there were a correlation between extreme surface temperatures and pilot human factors mishap rates, the expected curve would be a parabolic shape with the central low at the mid temperature ranges and increasing rates as you progress in to the extreme temperatures.

Figure 1 shows the plot of the mishap rates versus high temperature for the F-15C aircraft. There were a total of 95 mishaps that qualified for the study, with 947,746 flying hours for a mean mishap rate of 10.02 mishaps per 100,000 flying hours, which is indicated by the bolded horizontal blue line. Visually, there is an obvious spike at the "above 100" range. However, a chi-square analysis indicates that the spike is not statistically significant, primarily because of the sample sizes, i.e. the number of flying hours at that temperature range. In this case, a difference of one mishap would cause a large change in the mishap rate. We will discuss this problem later.

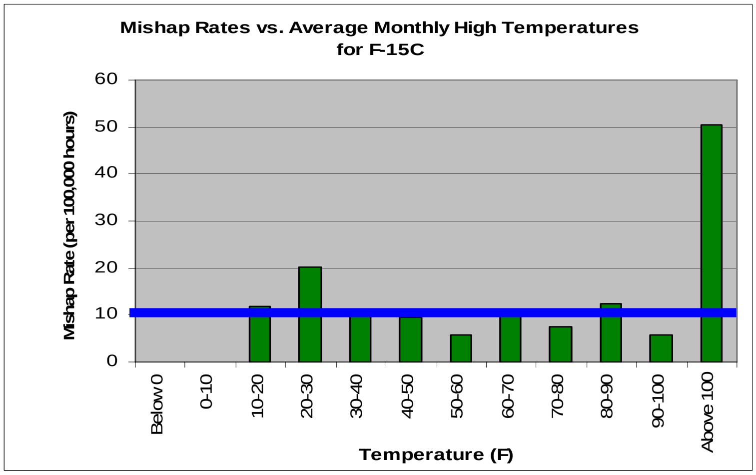

Figure 1. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for F-15C (scale enlarged to show all values).

Figure 2 shows the plot of the mishap rates versus high temperature for the F-15E aircraft. There were a total of 34 mishaps that qualified for the study, with 480,930 flying hours for a mean mishap rate of 7.07 mishaps per 100,000 flying hours (again shown by the horizontal blue line). There is a noticeable spike at the lower temperature range, but a chi-square analysis indicates that this is not statistically significant. In this case, there is one mishap in the temperature range. The mishap rate is 26.5 because of this one mishap, whereas it would be 0.0 with zero mishaps.

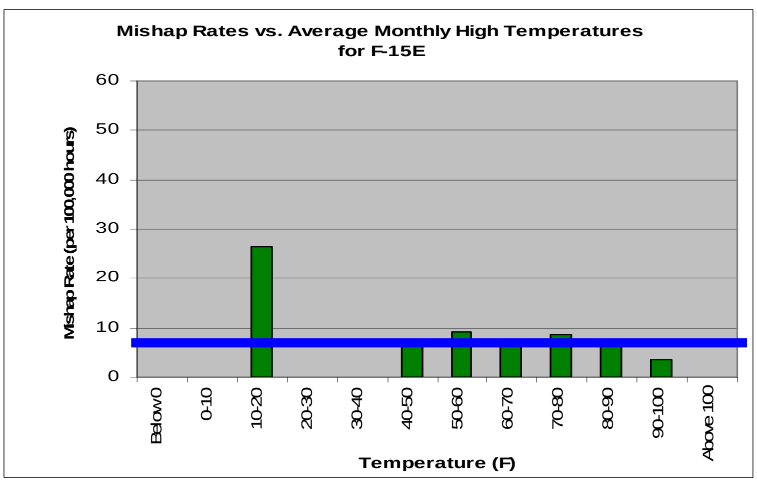

Figure 2. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for F-15E (scale enlarged to compare with previous figure).

Figure 3 shows the plot of the mishap rates versus high temperature for the F-16C aircraft. There were a total of 113 mishaps that qualified for the study, with 1,753,934 flying hours for a mean mishap rate of 6.44 mishaps per 100,000 flying hours (shown by the horizontal line). Visually, it appears that there is no correlation between mishap rates and temperatures for this weapon system. Statistical analysis also confirms this result.

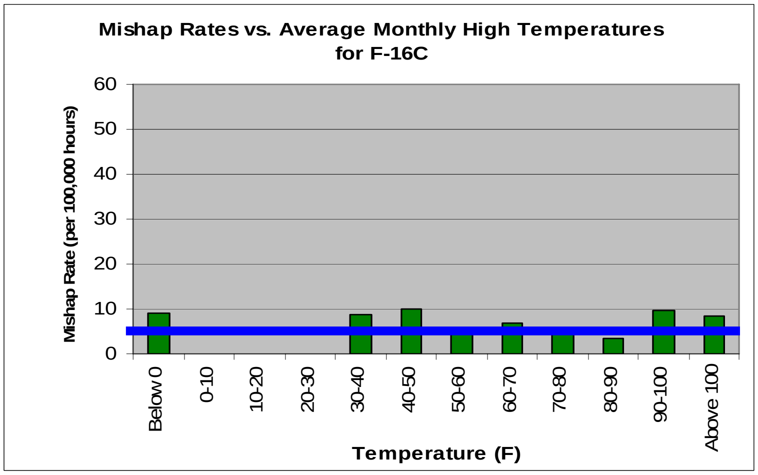

Figure 3. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for F-16C (scale enlarged to compare with previous figures).

Figure 4 shows the plot of the combined mishap rates versus high temperature for all the fighter aircraft in this study. There were a total of 242 mishaps that qualified for the study, with 3,182,614 flying hours for a mean mishap rate of 7.60 mishaps per 100,000 flying hours (shown by the horizontal blue line). Visually, it is obvious that there is no correlation between mishap rates and temperatures when the data for all fighters is compared. There is no apparent trend of a higher rate when examining mishaps versus average high temperatures across all airframes and bases. Statistical analysis also confirms this result.

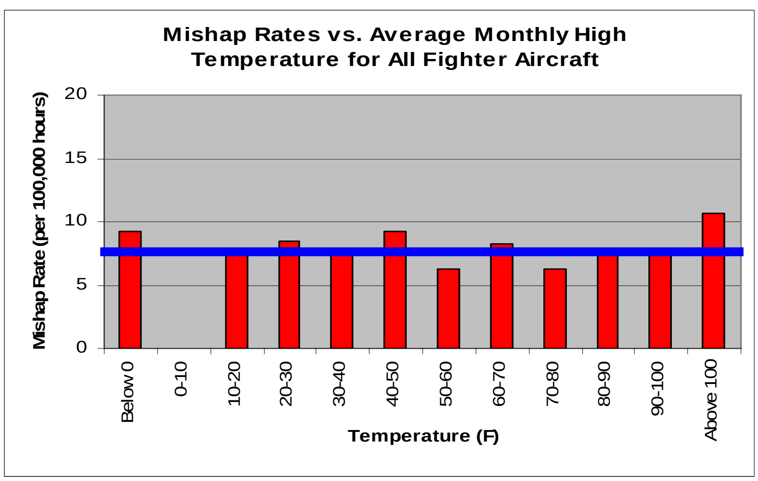

Figure 4. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for All Fighters.

During the statistical analysis of these data, the power values were difficult to interpret due to the small numbers at the extreme ends of the temperature scale. Therefore, the analysis was re-accomplished using degree increments of 20 degrees instead of 10 degrees. The high temperature ranges were thus "under 10F", 10-30F, 30-50F, 50-70F, 70-90F, and "above 90F." This allowed for a more statistically significant analysis, which is described below.

Figure 5 shows the graph of mishap and high temperature data for the F-15C aircraft. Figure 6 shows the graph of mishap and high temperature data for the F-15E aircraft. Figure 7 shows the graph of mishap and high temperature data for the F-16C aircraft. Figure 8 shows the graph of mishap and high temperature data for all fighter aircraft. Other than the F-15C chart which shows a visible spike in the lower temperature range, there are no other visible trends. Statistical analysis indicates that the spike is not significant. As before, there is no apparent trend in the rate when examining mishaps versus average high temperatures in all these cases, and the statistical analysis also showed this.

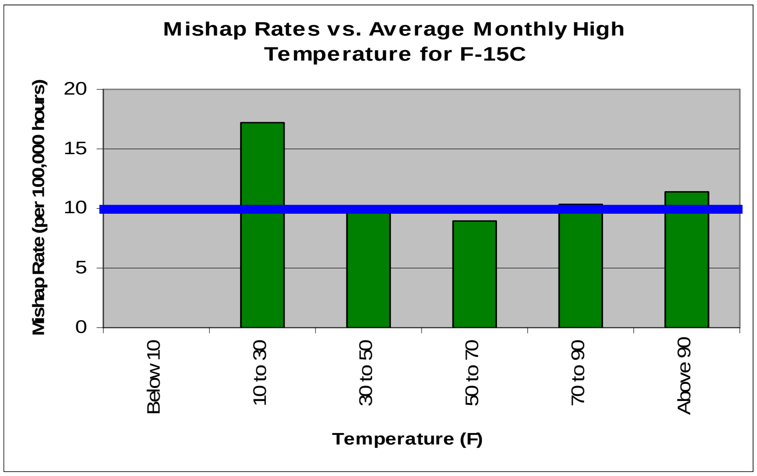

Figure 5. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for F-15C (20 degree increment).

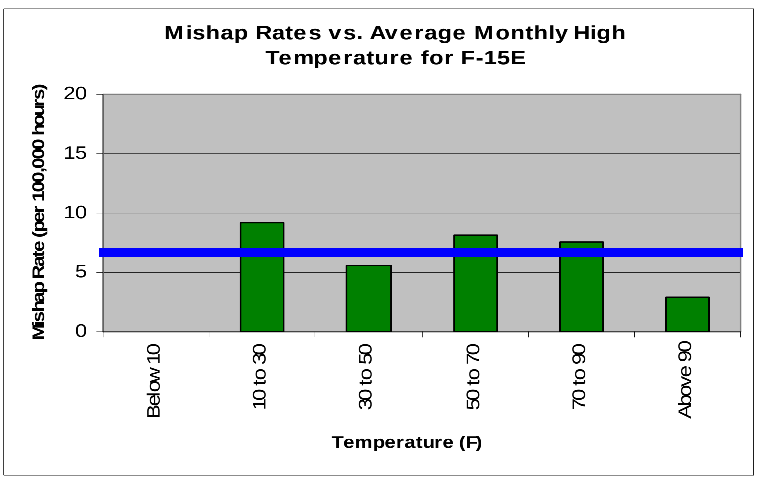

Figure 6. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for F-15E (20 degree increment).

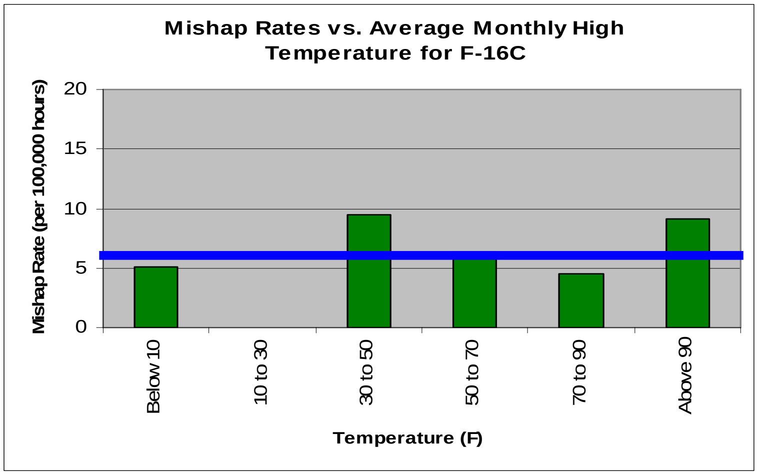

Figure 7. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for F-16C (20 degree increment).

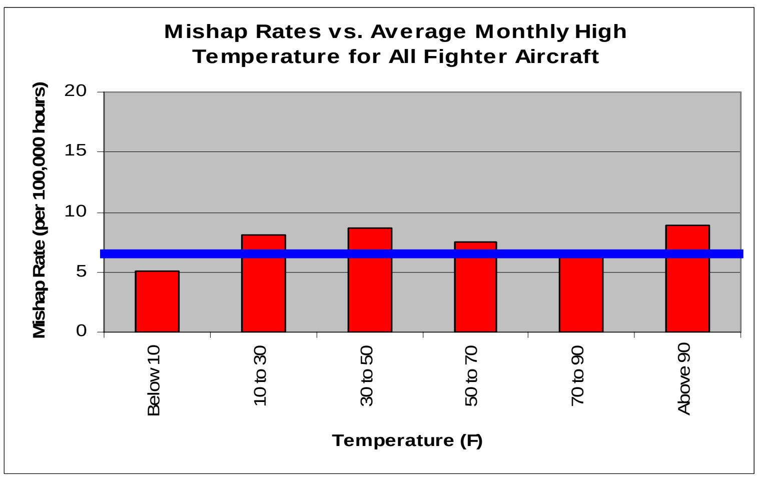

Figure 8. Pilot Human Factors Mishap Rates vs. Average Monthly High Temperatures for All Fighter Aircraft (20 degree increment).

Overall, there is no statistically significant trend in mishap rates due to pilot human factors at the temperature extremes that are typically responsible for thermal stress.

Average Low Temperatures

The study was repeated for average low temperatures to examine possible correlations with those numbers as well. The exact same mishap data and flying hours were correlated with the appropriate monthly average low surface temperature and then compared. The analysis was performed using the original 10 degree data and then with the 20 degree data to parallel the high temperature analysis.

Figure 9 shows the plot of the mishap rates versus low temperature for the F-15C aircraft. Visually, the shape of the curve is what one would expect if temperature extremes were leading

to thermal stress that influenced the pilot's performance. The curve's shape is roughly parabolic, with the higher values at the temperature extremes. When a statistical analysis is performed, there is no significant correlation. However, we ran into the same problem with small numbers at the extreme ends of the spectrum as in the high temperature data.

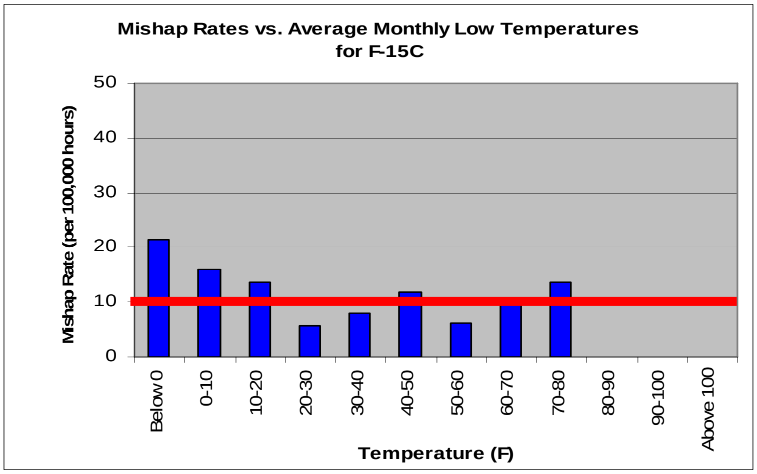

Figure 9. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for F-15C (scale enlarged to compare with later figures).

Figure 10 shows the plot of the mishap rates versus low temperature for the F-15E aircraft. Visually, there is an obvious spike in the "below 0" temperature range. When a statistical analysis is performed, there is no significant correlation due to the small numbers at the extreme ends of the spectrum.

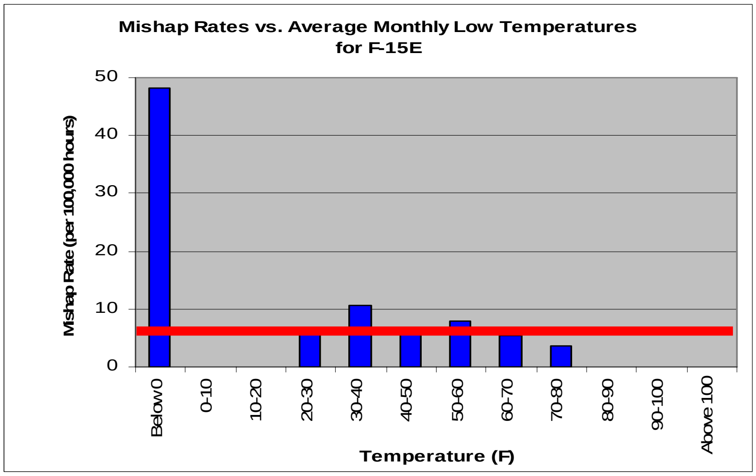

Figure 10. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for F-15E (scale enlarged to show all values).

Figure 11 shows the plot of the mishap rates versus low temperature for the F-16C aircraft. Visually, there is a smaller spike in the 80-90 degree temperature range. When a statistical analysis is performed, there is no significant correlation due to the small numbers at the extreme ends of the spectrum.

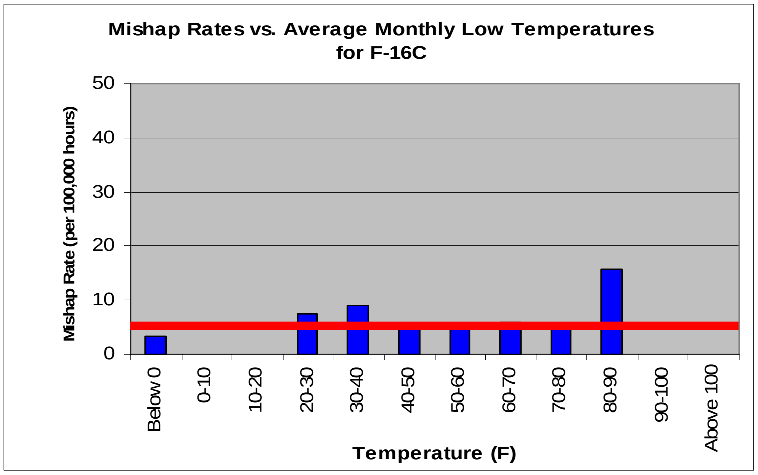

Figure 11. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for F-16C (scale enlarged to compare with previous figures).

Figure 12 shows the plot of the mishap rates versus low temperature for all the fighter aircraft. Visually, there is a large spike in the 80-90 degree temperature range. When a statistical analysis is performed, there was a significant difference here at the highest temperature range ($p = 0.147$), but again the small sample size should be noted. This is also a manifestation of the data gathering, since a large majority of the mishaps in the high-temperature comparison that were originally located in the top 3 categories (80-90, 90-100, and above 100) would be relocated to the 80-90 degree range for the low temperature, by virtue of the way the high and low temperatures are related in hot climates.

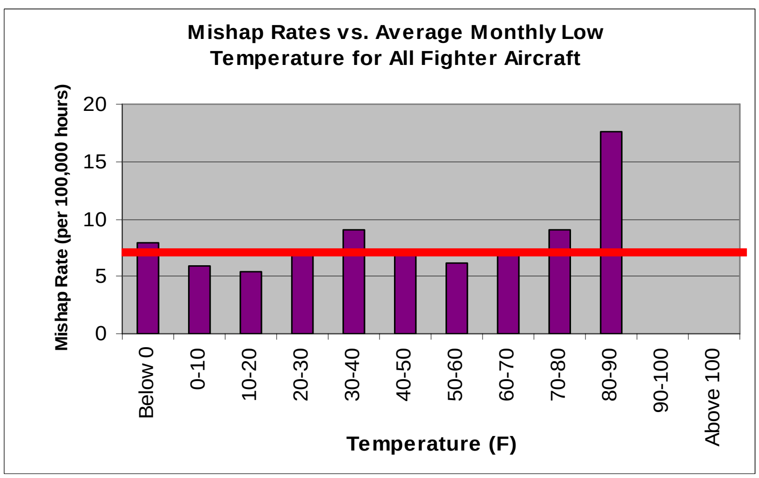

Figure 12. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for All Fighter Aircraft.

With the continuing problems involving the statistical analysis of the low temperature comparisons (as occurred with the high temperature comparisons), the analysis was repeated using 20 degree temperature ranges.

Figure 13 shows the plot of the mishap rates versus low temperature for the F-15C aircraft. Visually, the shape of the curve is what one would expect if temperature extremes were leading to thermal stress that influenced the pilot's performance. The curve's shape is roughly parabolic, with the higher values at the temperature extremes. When a statistical analysis is performed, however, there is no significant correlation.

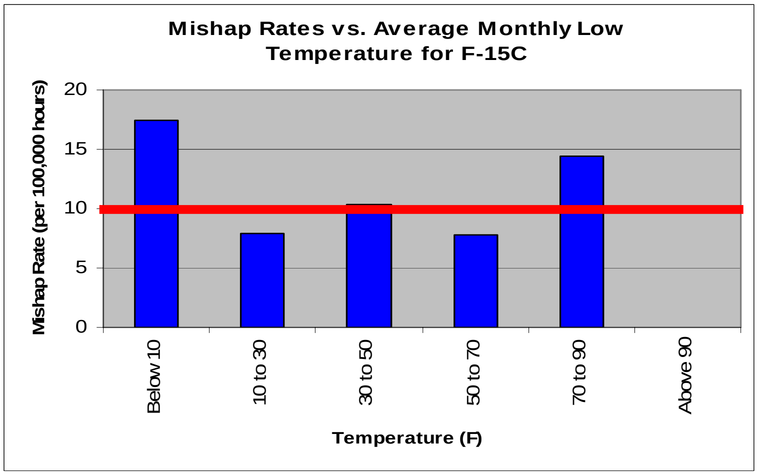

Figure 13. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for F-15C (20 degree increments).

Figure 14 shows the plot of the mishap rates versus low temperature for the F-15E aircraft. Visually, there is a small spike in the "below 10" temperature range. When a statistical analysis is performed, however, there is no significant correlation. It is interesting to note that the F-15E data in the 10-degree increment study shows a similar spike in the same area of the temperature scale as the F-15E data in the 20-degree increment study.

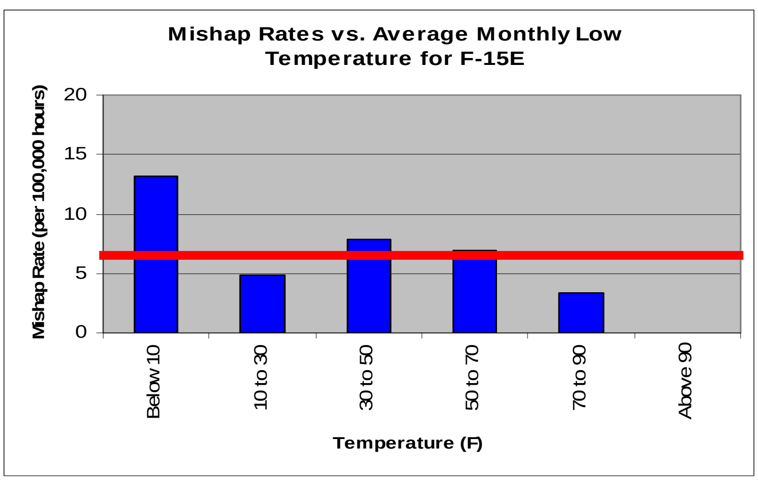

Figure 14. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for F-15E (20 degree increments).

Figure 15 shows the plot of the mishap rates versus low temperature for the F-16C aircraft. Visually, there is no apparent spike in any temperature range. When a statistical analysis is performed, there is no significant correlation.

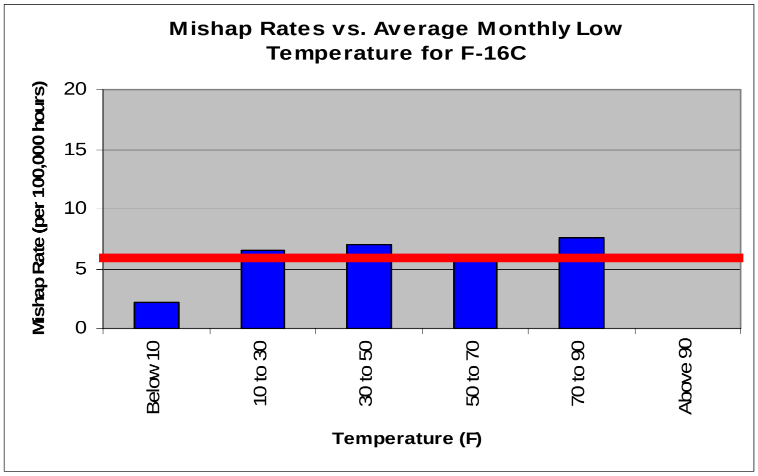

Figure 15. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for F-16C (20 degree increments).

Figure 16 shows the plot of the mishap rates versus low temperature for all fighter aircraft. Visually, there is only a small increase in the 70-90 degree mishap data. When a statistical analysis is performed, there is no significant correlation.

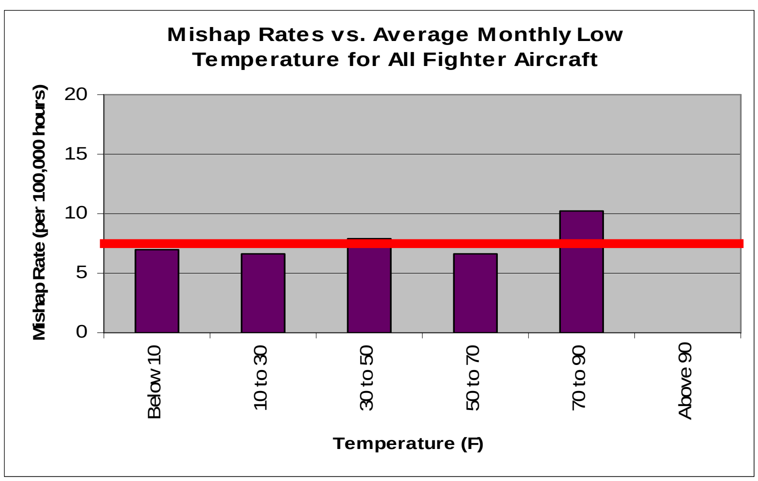

Figure 16. Pilot Human Factors Mishap Rates vs. Average Monthly Low Temperatures for All Fighter Aircraft (20 degree increments).

Other Findings

During the analysis of the data, we observed an interesting fact about the average monthly temperatures in our study and the number of flying hours in those temperature ranges.

When plotted, the data showed some interesting trends about how the flying hours are spread across the temperatures and how the average temperatures themselves are spread across the year.

Figure 17 depicts the number of months in which the various temperatures were experienced in the 10-year period. Put another way, there were 120 months in the 10 year study per base (12 months per year x 10 years). Each of those 120 months had an average monthly high temperature. For example, referring to Figure 17, in this study, there were 24 instances of bases where the average monthly high temperature was in the 10-20 degree range. The same analysis was performed for the average monthly low temperature (in 10-degree F increments), and that graph is shown in Figure 18.

The data in this study included the bases listed earlier, and if a base was used more than once for the multiple airframes, the temperatures were not used more than once in the count. So the total number of bases included was 20 for a total of 2400 months. In addition, sometimes a weapon system was no longer stationed at the base (Moody AFB), and so the temperature and mishap data stopped at that point, and the data do not add up to 2400 total. Overall, the data shows that, during the 10-year period, the majority of the time (58%) the bases experienced high temperatures between 60 and 90 F. This is the same percentage for the low temperatures between 40 and 70 F. These are considered the "normal" temperature ranges for operations.

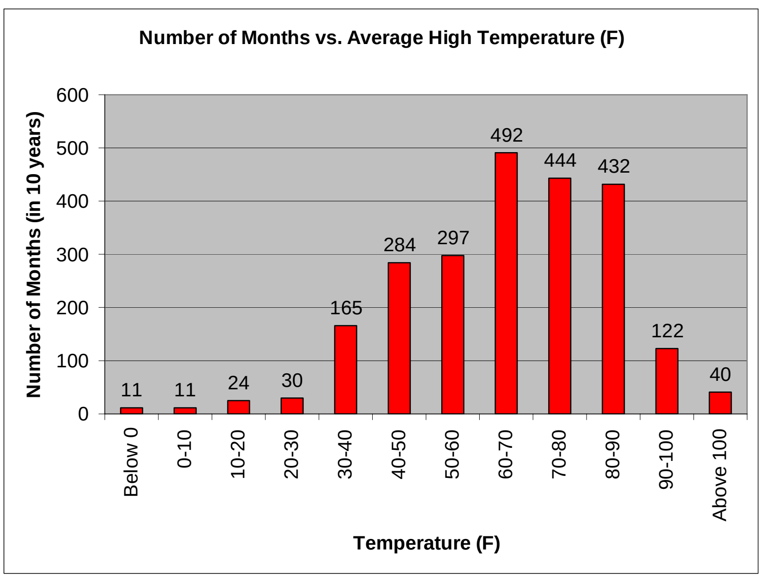

Figure 17. Number of Months vs. Average Monthly High Temperature.

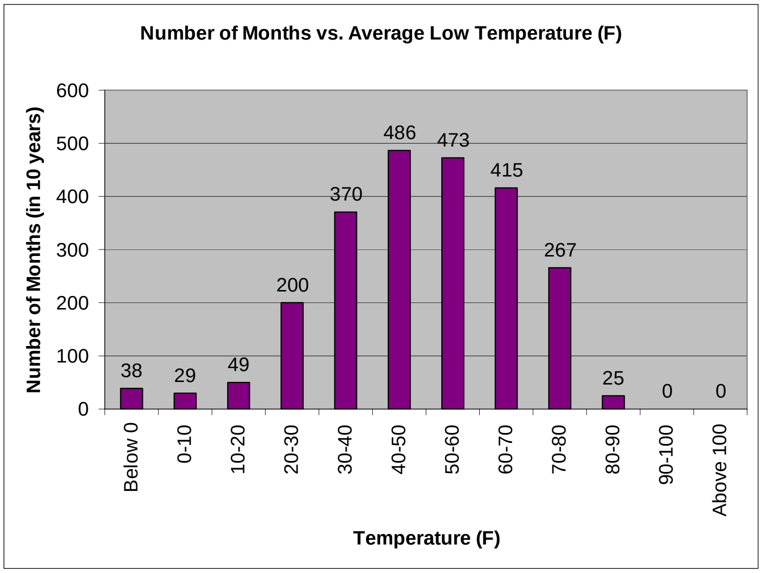

Figure 18. Number of Months vs. Average Monthly Low Temperature.

Figure 19 shows the flying hour curve (high temperatures), which exhibits the same trend (see figure 17). Figure 20 shows the same data with the low temperatures, the data show the same trends, with the expected shift in the peak temperature range by about 20-30 degrees. In other words, the peak number of months for the high and low temperatures occurred at 60-70 degrees and 40-50 degrees, respectively. A total of 3.18 million flying hours were included in this study. The flying hour data were plotted based upon the average temperature in that month. If a month had a high temperature that averaged 30-40 degrees, then the hours corresponding to that month were added to the 30-40 degree column. Over 59% of the Air Force fighter flying hours are flown in the same 60-90 F range that was mentioned before. Moreover, the lower number of hours flown in the temperature extremes may lead to lower pilot performance due to proficiency issues. This is a topic that will be discussed later in this report.

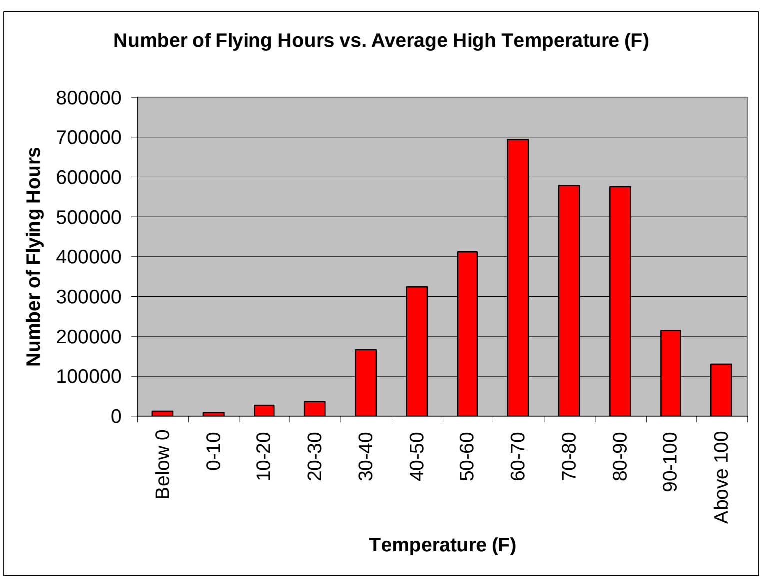

Figure 19. Number of Flying Hours vs. Average Monthly High Temperature.

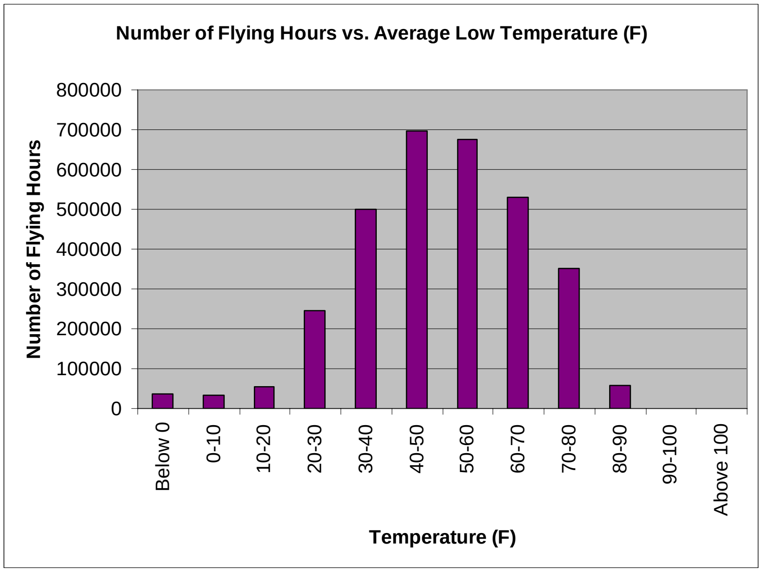

Figure 20. Number of Flying Hours vs. Average Monthly Low Temperature.

DISCUSSION

Overall, there were no statistically significant correlations between temperature extremes (thermal stress) and flight mishap rates due to pilot human factors. The data do not show any trends between hotter or colder home station environments and the mishap rates. With the lower number of flying hours in those temperature ranges, one would expect to see higher mishap rates because any mishaps occurring in those ranges would affect the rates to a larger extent. However, in most instances that it not the case. It should also be noted that the statistical analysis was significantly underpowered, which is a common issue for rare event analyses. However, the authors feel that this does not compromise the integrity of the findings.

There are many aspects that must be considered in the discussion:

PROFICIENCY: As was mentioned before, the number of flying hours dropped significantly in the extreme temperature ranges. This would generally lead to a drop in proficiency, which would lead to a higher mishap rate due to pilot human factors. However, since there appears to be no significant trend in this study to show this, the operations community is most likely managing their proficiency well. The United States Air Force flies more hours in fighter aircraft, per pilot, than any other military organization. One possible explanation is that the pilot's proficiency is very high during the peak flying hours such that proficiency does not drop below unsafe levels during the lean months of flying time.

PERSONAL PROTECTIVE EQUIPMENT: The pilots are issued special gear to help them deal with the extreme temperatures. These include standard G-suits, COMBAT EDGE equipment, full-coverage G-suits, gloves, helmets, thermal undergarments, and other gear. This equipment may be a significant reason why the pilots are not adversely affected (in terms of mishap rates) by the extreme temperatures. However, an argument can be made to continue to

improve the personal equipment of the pilot, to include such items as the full-body G-suit with internal temperature control, which would greatly assist the pilot in maintaining a comfortable body temperature even in the extreme environments. Improvements in equipment could possibly lead to further declines in mishap rates due to improved aircrew human factors.

TIME OF EXPOSURE: Another possibility to be considered is that the pilot's exposure to the extreme temperatures at home station is limited to ground operations such as the walk-around and pre-flight. Depending upon the weapon system and the mission, the ground time may be long or short. If the time is short, then extreme temperatures on the ground may not adversely affect the pilot. However, the opposite is true about longer times on the ground.

ACCLIMATIZATION: Most of the extreme temperatures are experienced during most of the year at various locations. For example, Eielson AFB experiences the extreme cold temperatures while Luke AFB experiences the extreme hot temperatures. The human is highly adaptable to these conditions when exposed to them over a long period of time, and thus the pilot becomes more tolerant of the conditions when stationed there over several months to years. This tolerance would make the extreme conditions less severe to that individual. However, it would also show that bases such as Mountain Home, who have the most extreme fluctuations in temperatures during the year, would not have much time to develop that tolerance.

MISHAP CAUSES: It might still be argued that there might be a true correlation between mishaps caused by pilot human factors and temperature extremes. However, there may be other mishap-causative factors during other times of the year that balance out the mishap rates across the year and temperature ranges and disguise the effects of thermal stress on the mishap rates. Based upon the scope of this study, it is impossible to determine if this situation is occurring, but one might argue that the possibility does exist.

FLIGHT SAFETY: The safety offices of the flying bases are fastidiously proactive when it comes to preparing for extreme temperatures. The Flight Safety staffs give numerous briefings to the pilots prior to and during the months of extreme weather, increasing awareness of the hazards and risks that occur in those regimes. With the addition of the "Index of Thermal Stress" (ITS), squadron leadership can best judge if the weather conditions are detrimental to their pilots. Before stepping to their aircraft, pilots are aware of the type of conditions to expect, with ITS in the green, yellow, or red depending upon the severity of the temperature and humidity. Lastly, the squadrons employ Operational Risk Management (ORM) tools to assess the risk of the mission, and in all cases, the temperature is taken into consideration when determining this risk factor.

CONCLUSION

The data in this study do not support any statistically significant correlations between extreme home station surface temperatures and the mishap rates due to pilot human factors. Even with the lower number of flying hours at the ends of the temperature spectrum, the mishap rates do not show statistically significant increases as would be expected based upon traditional human performance studies based upon the environment. There are several possible

explanations for this lack of detrimental affect. First, the time of exposure to the extreme temperatures might be small enough to avoid having an effect. Second, the pilot's personal equipment may be working properly to mitigate the risks of the extreme temperatures. Third, the pilots may be developing a tolerance to the extreme conditions over time that would minimize their effects. Fourth, other mishap causative factors may be disguising the effects of thermal stress on the mishap rates. Lastly, the Flight Safety office at each of these bases is extraordinarily proactive in preparing the pilots for the coming extreme weather, giving briefings, disseminating other information, and performing ORM assessments to get the pilots into the proper mindset to deal effectively with the temperatures. This combination of factors most likely leads to the surprising result that there is no apparent correlation with higher mishap rates and thermal stress due to extreme temperatures.

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APPENDIX A
F-15C RAW DATA

TABLE A-1. Eglin F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96					1	1		1			1	1
FY 97												
FY 98						1		1				
FY 99				1								
FY 00	1				1							
FY 01												
FY 02												1
FY 03											1	
FY 04												
FY 05							1					

TABLE A-2. Eglin F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1202	1316	939	1667	1706	2069	1809	1842	1435	1753	1643	721.9
FY 97	1311	783.1	901.5	1791	1724	1738	1141	1202	1069	1505	1161	865.9
FY 98	1206	1185	1134	961.6	1248	1347	889.2	1101	955.5	858.2	1047	3083
FY 99	1232	806.6	1744	1277	1265	1249	1165	940	1157	932.6	1009	982.7
FY 00	1259	1056	971.4	1050	1000	962.2	1097	1198	1220	997.6	1315	594
FY 01	1233	771.9	1282	1403	1351	1063	1216	1337	1132	897.7	1012	689.9
FY 02	1234	1083	985.4	1748	717.8	1740	1033	914.8	1097	1201	1039	656.8
FY 03	1149	998.9	797.2	821.5	795.1	1800	1620	658	902.7	1190	1039	859.2
FY 04	1152	663.3	787.7	693	834.8	1291	1137	1079	1204	1037	1073	1009
FY 05	1029	739.8	712.2	902.3	870	1135	954.6	626.2	730.3	696.3	1071	1118

TABLE A-3. Eglin Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	79.1	67	60.4	59.1	61.7	63.7	71.8	83.6	86.4	88.5	87.8	84.8
FY 97	76.5	69.2	63.8	63.3	67.2	76.6	74.7	82.2	85.5	90.5	90.0	89.1
FY 98	78.7	68.3	60.7	63.6	64.1	67.7	75.4	86.3	91.6	91.1	90.6	85.4
FY 99	82.4	74.8	68.0	66.3	67.7	70.1	79.6	82.2	87.2	89.0	91.2	87.6
FY 00	80.0	73.0	63.6	63.5	69.3	74.0	76.1	84.3	87.4	92.7	91.0	85.4
FY 01	80.4	68.5	60.3	59.1	69.5	67.6	77.0	82.7	86.4	89.0	88.3	86.3
FY 02	79.2	77.0	68.2	64.2	63.2	71.0	78.3	83.7	86.7	90.0	88.9	86.6
FY 03	81.1	69.3	62.6	60.1	64.2	71.9	75.8	84.5	86.4	86.3	88.2	86.0
FY 04	78.7	75.6	62.1	62.1	59.8	73.3	75.2	83.5	87.4	89.7	88.3	87.1
FY 05	80.9	73.4	63.4	65.4	65.8	69.7	72.8	82.3	86.9	88.9	89.1	90.1

TABLE A-4. Eglin Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	61.0	46.9	41.6	38.2	43.5	46.3	53.9	66.2	71.9	74.9	73.1	69.3
FY 97	58.1	49.9	44.3	46.5	50.6	59.5	58.1	64.7	71.6	75.8	73.3	71.6
FY 98	61.9	50.9	45.9	48.2	47.1	51.3	60.3	68.1	75.5	76.4	74.7	73.0
FY 99	62.9	56.5	53.1	49.8	50.2	50.8	64.2	64.3	72.5	74.5	76.4	69.4
FY 00	61.3	50.7	43.3	46.9	49.8	54.2	56.4	68.1	73.2	75.5	74.9	70.2
FY 01	57.3	52.1	40.7	40.6	52.1	51.3	59.7	65.0	73.0	74.5	73.5	68.0
FY 02	59.5	57.0	50.7	48.6	43.0	52.8	63.3	67.2	72.0	73.1	72.3	72.8
FY 03	67.3	51.1	44.5	39.3	46.3	56.6	60.2	69.6	72.8	73.4	74.9	69.7
FY 04	61.4	55.9	41.4	45.0	46.2	52.5	54.9	66.7	72.1	74.6	73.0	71.8
FY 05	66.4	58.6	45.3	49.9	51.3	53.4	56.1	63.9	72.5	75.3	75.0	72.6

TABLE A-5. Elmendorf F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98			1									
FY 99		1			1						1	
FY 00				1								
FY 01												
FY 02										1		
FY 03												1
FY 04					1	1						
FY 05												

TABLE A-6. Elmendorf F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	947.6	921.2	807	606.7	1010	996.2	940.3	907.6	946.7	1006	766.1	590
FY 97	647	691.7	1457	697.2	902.6	937.1	1064	830.1	960.9	1022	782.5	849.6
FY 98	912.1	623.6	525.4	1863	1392	1687	1260	796.6	933.3	915.3	1037	1521
FY 99	735	646.4	612	671.2	1015	953.6	892.8	1047	1273	923.9	865	658.7
FY 00	1300	1079	1093	824.8	1186	1058	839.6	1086	884.6	694.7	1139	455.1
FY 01	1093	877.2	932.5	1098	806.8	1093	1301	1458	1213	1156	1291	519
FY 02	998.5	891.3	643	899.8	953.7	1447	1645	1493	1136	1119	980.8	460.7
FY 03	975.9	808	779	849	1035	1040	1323	1134	1171	1240	970	726.8
FY 04	1223	1129	737.9	980.6	981.1	949.3	1393	1047	1305	788.5	1077	880.4
FY 05	673.7	821	834	1088	843.9	1278	1074	954.8	947.4	804.5	1270	960

TABLE A-7. Elmendorf Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	43.4	28	22.5	11.1	23.0	39.4	48.6	60.4	67.1	67.4	64.6	53.1
FY 97	34.3	24.0	16.6	19.3	33.8	35.0	49.2	60.7	69.5	69.2	66.1	58.2
FY 98	35.3	31.5	22.9	19.9	34.2	39.6	46.7	53.2	63.9	66.4	60.7	58.1
FY 99	46.2	29.2	18.8	17.6	18.1	35.7	45.5	57.1	66.7	67.7	65.6	57.8
FY 00	40.7	26.6	21.3	21.9	36.2	41.2	50.7	57.9	67.5	65.7	64.9	56.8
FY 01	42.8	36.5	30.6	34.6	33.0	39.3	47.5	53.8	70.2	65.4	67.8	58.9
FY 02	36.7	24.8	16.6	30.3	30.0	33.5	43.6	61.1	64.7	70.3	65.8	57.8
FY 03	47.7	39.9	29.4	26.4	35.8	35.8	49.6	58.6	66.8	72.7	66.4	57.8
FY 04	47.0	28.1	21.4	14.9	33.7	34.9	47.4	62.3	69.8	72.4	74.3	54.2
FY 05	45.0	34.0	27.6	24.2	29.7	41.3	53.4	64.4	70.1	73.1	69.4	59.3

TABLE A-8. Elmendorf Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	31.6	10.8	8.9	-6.4	6.3	17.2	29.8	40.7	47.7	52.9	48.5	37.3
FY 97	14.5	11.1	-0.3	3.8	20.5	12.1	29.2	42.1	52.1	54.8	50.9	42.9
FY 98	20.4	20.0	7.4	3.7	15.2	19.5	29.4	39.1	49.3	51.6	48.5	42.9
FY 99	29.2	15.5	5.6	2.8	-2.5	16.0	28.4	38.8	48.7	52.4	51.5	43.8
FY 00	28.7	9.9	6.5	8.1	19.2	23.3	30.3	37.4	48.8	52.0	48.2	40.9
FY 01	29.3	24.3	18.5	21.4	16.7	24.1	30.3	37.1	51.5	53.6	53.0	42.8
FY 02	23.5	10.7	-0.6	18.4	11.6	9.8	23.4	41.0	48.5	54.0	51.5	44.2
FY 03	35.7	27.9	16.8	13.1	27.1	18.8	30.5	40.2	50.3	56.1	51.3	40.6
FY 04	33.9	15.7	7.3	-4.0	16.8	17.3	30.7	44.0	51.1	55.7	53.2	38.4
FY 05	32.9	22.1	14.3	8.4	10.9	25.7	31.8	44.2	51.1	56.4	52.7	46.5

TABLE A-9. Kadena F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1		1		1							
FY 97								1			1	
FY 98							1					
FY 99						1	1	1				
FY 00												
FY 01												
FY 02											1	
FY 03					1			1		1		
FY 04		1										
FY 05	1			1								

TABLE A-10. Kadena F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1003	1006	1219	1266	1435	1488	1409	1496	1436	1156	1068	825.1
FY 97	1720	1664	1736	1151	1201	1319	1329	1116	1466	1461	1125	754
FY 98	1257	1234	1133	1225	1209	1460	1083	1645	1853	1380	1086	1753
FY 99	957	1352	1146	1308	1364	1436	1231	1194	1259	1532	1288	966.5
FY 00	1491	895.9	1050	942.1	927.8	1265	1098	1261	1081	1026	1138	856.6
FY 01	928	577.7	571.8	620.8	1168	1023	1431	1200	1860	1831	1092	756.4
FY 02	1038	1057	1082	1160	1087	1087	1414	1143	1220	1134	1008	1142
FY 03	1604	1496	1198	1522	1508	2477	1115	979	835.7	1243	981	710.6
FY 04	1324	876.8	1194	1030	1145	1299	1351	1175	1012	1128	707.1	589.7
FY 05	909	1035	894.4	685.2	834.2	1166	922.6	705.3	559.3	753.9	1121	672.5

TABLE A-11. Kadena Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	85.8	76.6	70.0	69.8	67.5	72.8	73.5	78.6	87.1	90.8	87.2	87.2
FY 97	80.9	78.0	69.9	65.9	66.7	72.6	76.0	80.9	83.1	88.8	87.1	85.8
FY 98	80.5	77.3	71.3	68.7	68.3	72.6	78.9	83.8	86.9	90.6	93.5	90.3
FY 99	87.2	79.6	75.0	70.6	70.7	76.4	78.6	82.1	89.1	90.4	89.8	90.3
FY 00	87.0	79.8	71.7	71.1	64.5	69.6	73.2	78.3	85.1	86.9	85.7	83.8
FY 01	83.9	77.8	71.7	67.5	69.5	69.0	74.4	77.8	84.6	90.8	89.9	86.6
FY 02	82.2	75.9	70.0	66.3	67.4	72.1	77.6	81.9	84.5	86.2	88.8	85.8
FY 03	78.7	73.2	70.7	64.6	68.6	69.3	77.3	80.8	84.6	90.8	89.8	87.3
FY 04	80.4	78.7	69.1	65.8	67.5	71.0	76.6	82.9	83.1	87.4	88.3	85.3
FY 05	80.6	77.0	71.5	65.6	67.7	67.3	75.2	79.0	83.9	89.1	89.0	87.3

TABLE A-12. Kadena Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	73.9	63.4	58.4	57.1	57.1	61.6	62.5	68.6	78.0	79.8	76.8	76.2
FY 97	70.7	69.4	60.2	55.6	57.5	62.7	66.6	70.4	74.5	77.9	78.2	74.2
FY 98	68.6	65.8	60.2	59.4	59.3	62.1	68.5	74.3	76.8	80.4	82.5	79.8
FY 99	76.8	68.6	63.2	60.3	57.6	67.0	67.2	72.0	79.8	80.9	80.4	78.9
FY 00	73.7	67.2	60.5	60.0	56.2	59.9	63.4	67.3	76.6	77.1	77.7	72.2
FY 01	73.1	67.9	59.8	56.4	58.5	57.5	64.5	69.3	78.1	80.0	78.3	77.8
FY 02	71.2	63.3	60.1	56.3	53.9	59.2	66.8	71.0	76.5	78.3	78.0	75.5
FY 03	67.8	63.1	60.8	51.5	57.9	58.1	67.9	71.1	76.2	81.2	79.6	76.5
FY 04	69.2	69.7	57.8	54.9	54.0	61.4	66.8	73.1	72.0	77.6	78.7	76.0
FY 05	71.5	62.9	60.2	57.1	59.8	57.4	65.2	70.6	76.3	80.3	79.2	76.4

TABLE A-13. Lakenheath F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96						1						
FY 97												
FY 98							1					
FY 99					1				1			
FY 00												
FY 01												
FY 02												
FY 03												
FY 04						1						
FY 05			1									

TABLE A-14. Lakenheath F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	454.1	427.3	307.8	374.4	362.2	569	489.5	653.4	471.8	502.5	501.4	378.4
FY 97	505.8	411.3	354.3	350.8	432.6	538	467.2	382.3	546.5	491.8	425.5	318.3
FY 98	593.1	774	721.1	598.6	446.2	443.3	528.5	559.9	611.6	645.1	647.9	1216
FY 99	422	312.7	351.8	421	510.3	1345	2393	2428	1097	117.8	508.5	556.6
FY 00	521.6	489.2	370.3	476.1	582.5	666.6	580.4	712.1	653.6	629.2	732.8	560.1
FY 01	457.4	546.2	437.3	427.8	443.8	680.3	776.9	881	503.3	709.8	688.1	441.7
FY 02	655.3	362	333.7	643.4	613.2	530.2	560.7	575.3	496.9	632.1	555.8	489.8
FY 03	646.6	490.9	371.2	465.5	533.8	624.3	662.7	615.5	597.8	504.1	537.7	483.8
FY 04	642.4	586.4	377.8	513.4	490	539.4	536.7	566.5	532.8	479	574.8	315
FY 05	605.8	470.8	483.2	506.8	566	692.9	575.2	374	428.3	459.1	433.5	333.6

TABLE A-15. Lakenheath Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	57.5	47.0	38.3	41.1	40.4	42.0	50.3	52.8	61.0	68.1	66.1	58.4
FY 97	55.2	45.8	39.8	37.6	48.9	50.1	49.2	58.4	61.4	68.1	72.6	61.7
FY 98	52.6	51.4	45.4	43.1	47.0	49.9	52.9	60.4	63.9	65.6	67.2	66.9
FY 99	53.0	44.2	43.6	45.1	43.6	49.0	50.3	57.1	59.3	71.3	64.1	67.2
FY 00	53.9	49.0	43.0	44.7	46.3	48.0	51.2	57.4	68.1	65.9	70.9	66.6
FY 01	56.5	46.5	47.7	40.3	41.4	45.8	49.4	60.6	62.8	70.6	72.9	61.9
FY 02	61.8	47.6	43.4	46.1	48.5	48.5	53.5	58.3	63.6	60.2	66.2	62.0
FY 03	55.9	49.6	43.7	39.0	39.9	50.0	51.4	54.5	64.7	65.4	68.0	64.0
FY 04	49.7	49.8	44.6	43.2	45.9	46.7	50.5	58.8	63.8	65.5	68.5	62.6
FY 05	55.6	48.8	43.6	44.8	40.8	45.5	50.2	56.3	68.5	65.1	61.7	63.6

TABLE A-16. Lakenheath Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	52.2	43.7	35.3	38.3	34.4	37.7	44.6	45.2	55.2	60.9	58.4	53.6
FY 97	50.4	40.4	36.1	33.2	42.5	44.9	42.7	49.1	54.8	58.9	63.0	54.0
FY 98	47.3	46.9	41.1	38.5	43.2	44.4	44.4	51.3	55.8	57.1	58.0	56.1
FY 99	48.5	39.3	40.0	40.7	38.6	42.7	45.4	52.7	52.7	65.6	60.5	57.9
FY 00	49.1	43.5	37.6	38.3	40.9	42.0	43.3	50.3	56.7	59.6	61.7	59.8
FY 01	50.3	43.2	44.9	37.6	37.5	41.4	45.1	51.3	59.4	63.5	63.0	53.5
FY 02	55.5	42.7	37.9	42.1	44.4	45.4	47.2	53.9	59.2	58.4	61.9	57.2
FY 03	52.8	46.4	41.3	36.4	38.5	44.6	48.7	49.6	61.1	63.1	66.2	57.2
FY 04	49.1	49.0	41.7	39.4	43.9	43.2	47.3	53.6	59.0	60.6	63.4	60.8
FY 05	53.2	46.4	40.7	41.8	37.4	43.0	47.0	51.2	63.7	62.1	57.9	61.1

TABLE A-17. Langley F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96							1					
FY 97												
FY 98		1										
FY 99												
FY 00	1									1		
FY 01							1				1	1
FY 02												
FY 03						1						
FY 04												
FY 05												

TABLE A-18. Langley F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1821	1679	1619	1865	1195	1567	1627	1608	1507	1703	1707	1562
FY 97	1531	1151	1057	1374	1134	1282	1582	1102	1080	1645	2247	1916
FY 98	1881	1865	1965	1134	882.2	1187	1332	1150	1207	1936	1832	6098
FY 99	1763	1787	1423	1187	1234	1632	1298	1389	1755	1872	1684	1499
FY 00	1396	1336	1149	1018	1380	1762	1810	2067	2089	1671	1753	1523
FY 01	1745	1838	1106	1417	1454	1776	1455	1503	1689	1682	1812	1698
FY 02	2543	1754	1351	1321	2357	1665	1675	1735	1595	1434	1553	1560
FY 03	2014	1455	1118	1252	1134	2233	1886	1516	1591	1796	1509	773.5
FY 04	1848	1206	1409	1418	1507	1817	1838	1332	2030	1592	1631	957.7
FY 05	1370	1066	991.7	1047	1135	1646	1025	778.1	688.9	877.8	888.2	817

TABLE A-19. Langley Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	73.5	59	46.3	44.7	49.6	52.9	68.3	73.0	83.4	84.7	81.5	79.2
FY 97	69.2	53.6	54.3	49.9	54.1	60.3	64.2	72.9	79.6	86.5	83.8	79.1
FY 98	69.1	56.8	50.6	54.3	52.9	57.6	68.7	72.0	82.8	85.2	85.5	82.5
FY 99	69.0	61.7	53.3	57.0	54.4	54.9	68.4	73.4	78.6	86.5	85.6	76.8
FY 00	68.3	63.7	54.8	47.5	55.4	62.0	65.0	77.1	82.2	82.1	82.4	76.6
FY 01	70.5	56.5	44.9	47.5	52.8	53.5	67.4	75.4	81.8	83.2	85.3	76.6
FY 02	71.4	65.8	58.5	52.9	56.2	62.5	72.3	74.8	84.9	87.9	86.0	79.8
FY 03	68.7	58.9	48.8	42.8	46.3	60.6	63.8	71.8	80.3	85.1	86.5	79.7
FY 04	69.7	67.5	51.9	46.5	49.0	59.2	67.6	82.2	81.4	85.6	82.4	79.4
FY 05	68.2	62.2	53.3	49.3	49.0	53.6	65.9	69.7	81.3	87.2	85.4	82.2

TABLE A-20. Langley Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	56.6	41.3	31.9	29.5	31.7	35.6	47.7	57.5	66.6	70.0	67.0	64.1
FY 97	52.8	36.7	38.2	34.5	38.8	43.7	46.0	54.7	64.2	70.9	66.7	64.2
FY 98	53.6	43.8	36.5	40.1	40.1	43.4	50.7	57.9	67.2	70.8	71.8	67.4
FY 99	54.3	44.4	39.9	38.6	37.4	37.4	50.3	58.2	65.8	72.2	71.1	65.5
FY 00	52.0	47.4	37.5	31.1	35.4	43.5	49.2	61.0	67.7	68.2	69.3	64.4
FY 01	52.3	40.4	29.8	31.2	35.8	38.7	49.0	57.5	68.0	67.9	70.6	62.7
FY 02	50.3	46.9	42.1	35.9	35.8	44.4	53.7	58.0	67.8	71.5	70.9	67.1
FY 03	57.2	42.9	34.3	29.5	33.2	42.6	48.3	56.5	66.1	71.7	73.8	68.2
FY 04	54.5	49.1	35.2	30.0	32.8	43.3	50.2	65.2	68.4	72.5	70.0	67.2
FY 05	55.1	46.8	37.6	33.6	34.5	37.4	48.6	54.1	66.9	73.1	72.0	68.0

TABLE A-21. Mountain Home F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96		1		1								
FY 97												
FY 98					1							
FY 99	1			1								
FY 00							1					
FY 01												
FY 02	1											
FY 03				1		1						
FY 04			1		1							
FY 05												

TABLE A-22. Mountain Home F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	372.2	465.9	334.9	479.4	410.7	565.9	488	564.3	385.3	595	486.9	480.6
FY 97	483.9	286.6	489.6	389.7	391.5	526.8	1078	1280	1044	433.6	369	317.9
FY 98	684.2	236.6	394.8	437.6	382.1	429.5	624.5	536	438.7	459.7	346.4	1101
FY 99	467.4	439.7	423.1	427.5	622	894.5	1013	1084	842.2	196.7	405.3	381.5
FY 00	307.6	447.5	334.7	447.9	483.7	391	334.4	384.1	365.8	379	562.3	455.2
FY 01	451.8	337.2	333.8	465.7	296.9	472.3	417.3	397.1	319.5	386.2	447	429.5
FY 02	438.7	328.9	517.5	499.8	372.8	508.6	484.8	355.2	705	795.3	777.4	559.4
FY 03	0	0	0	389.4	899.3	411.8	432.1	357.2	365.4	394.4	382.1	309.5
FY 04	373.3	342.4	327.8	379.8	433.8	494.7	335.7	463.2	496.9	254.5	317.1	205.8
FY 05	362.1	197.4	320.6	289.9	362.4	435.5	424	283.6	187.5	351.5	475.4	240.9

TABLE A-23. Mountain Home Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	64.2	53.4	39.7	38.9	43.5	55.4	61.5	68.0	83.7	94.7	92.3	77.5
FY 97	64.9	50.5	40.0	40.0	46.1	59.0	61.5	77.9	83.1	90.5	93.7	83.5
FY 98	66.1	52.8	39.0	45.5	47.2	54.9	60.5	67.7	77.8	96.9	95.3	84.1
FY 99	65.7	51.9	38.8	42.3	44.3	54.6	59.8	70.0	82.4	93.3	93.1	80.9
FY 00	71.1	58.2	36.9	40.4	50.6	54.7	69.8	75.0	87.0	94.9	95.0	79.3
FY 01	64.8	40.5	35.5	36.4	43.6	58.9	61.9	80.4	85.6	92.4	96.1	85.1
FY 02	67.7	54.5	35.1	36.2	44.5	54.6	64.0	72.2	81.2	95.7	86.8	81.4
FY 03	63.8	51.8	42.2	44.2	46.6	56.6	61.2	71.8	85.9	101.3	94.2	80.8
FY 04	73.8	45.6	42.3	32.4	38.5	60.1	66.1	71.2	84.0	97.1	90.8	79.1
FY 05	65.5	46.0	42.2	39.6	47.2	57.5	63.0	69.2	80.4	99.9	94.8	82.8

TABLE A-24. Mountain Home Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	34.3	32.7	25.8	23.8	23.7	31.7	36.2	42.1	49.8	61.8	57.7	46.2
FY 97	37.1	29.4	27.0	25.6	25.5	30.6	34.7	46.0	51.7	56.2	57.3	52.4
FY 98	37.2	30.9	20.7	29.4	30.1	32.5	35.7	43.9	47.8	61.0	58.4	54.0
FY 99	36.1	32.7	21.8	26.5	28.0	30.7	33.7	41.3	51.7	55.4	57.5	45.6
FY 00	36.7	35.6	24.1	25.9	32.5	30.4	39.7	47.8	53.3	58.7	57.9	47.2
FY 01	39.2	22.5	24.0	21.3	25.6	33.3	34.9	46.6	53.5	60.0	63.3	53.4
FY 02	40.3	33.6	24.5	24.6	23.9	31.8	38.1	46.6	50.4	65.3	57.3	48.2
FY 03	33.7	29.9	28.3	31.7	25.8	36.4	40.0	45.7	56.6	65.8	61.8	49.1
FY 04	44.7	27.6	30.3	23.5	27.3	33.1	38.4	45.5	54.2	63.1	59.5	46.5
FY 05	40.0	30.1	28.7	25.7	25.6	34.1	39.3	48.2	50.5	64.1	59.3	48.1

TABLE A-25. Nellis F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96						1						
FY 97												
FY 98										1		
FY 99									1			
FY 00											1	
FY 01											1	
FY 02												
FY 03						1						
FY 04		1							1			
FY 05						1	1					

TABLE A-26. Nellis F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	328.6	356	231.1	275.2	270.9	318	344.8	395.8	325.9	304.9	331.3	323.6
FY 97	365.7	250	256.7	237.8	262.8	366	274	322.8	306.6	249.7	271.5	258
FY 98	291.7	253.2	321.6	198.4	184.6	322.9	346.5	210.9	324	229.9	273.6	902.1
FY 99	279.7	291.5	294.3	234.9	252.6	361.1	334.5	345.3	286.8	126.9	274.9	311.4
FY 00	293.8	232.9	270.2	223.4	245.8	322.4	341.9	409.9	305.9	270.9	261.5	370.6
FY 01	313.3	308.3	272.6	230.3	208.8	344.4	343.8	363.9	301.8	221.3	300.9	224.9
FY 02	284.6	249.3	235.1	270.9	263	300	262.1	294.4	282.2	231.9	216.5	297.3
FY 03	224	232.8	183.1	231	190.8	273.3	258	253.7	303	254.3	215.1	235.9
FY 04	255.9	171.2	216.7	167.4	204.1	319.4	270.5	217	236.6	204.5	221.5	239.3
FY 05	237.8	261.6	160.7	211.9	201.9	357.3	263.7	230.1	229.4	174.5	273.7	319.8

TABLE A-27. Nellis Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	86.0	75.0	62.2	63.3	68.8	75.4	84.9	93.9	104.8	109.3	108.2	96.1
FY 97	83.2	69.7	58.8	59.5	65.2	78.9	80.1	96.6	98.7	104.3	105.1	95.5
FY 98	82.9	69.3	58.4	61.0	59.8	70.9	75.0	85.2	95.1	106.8	105.3	93.4
FY 99	80.9	67.5	60.7	63.4	66.6	75.3	74.8	89.3	99.8	102.7	103.4	96.8
FY 00	88.3	73.7	61.8	62.9	66.1	72.1	86.5	96.7	103.8	106.7	103.5	97.2
FY 01	81.1	62.5	62.2	56.9	61.8	73.2	78.5	97.7	104.8	106.2	105.3	98.4
FY 02	85.0	69.9	55.9	57.6	66.7	70.3	83.7	89.7	102.4	107.5	104.1	96.6
FY 03	80.9	69.3	58.3	67.1	62.8	72.1	75.9	90.8	101.4	107.4	102.5	98.5
FY 04	89.4	62.9	58.0	58.6	58.4	79.4	81.0	91.7	101.0	105.0	101.6	94.3
FY 05	78.2	63.8	58.3	59.0	61.9	69.9	78.3	91.1	97.8	107.5	100.7	94.3

TABLE A-28. Nellis Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	54.3	45.4	37.7	36.0	43.5	47.6	56.3	65.0	72.6	82.0	79.9	69.7
FY 97	54.6	46.5	38.6	39.8	41.0	47.1	54.1	68.1	74.3	75.9	78.6	72.6
FY 98	53.7	45.0	36.0	38.3	42.8	46.5	50.8	58.9	69.0	77.6	80.3	68.3
FY 99	54.2	43.0	36.7	36.8	40.0	48.6	51.3	63.4	70.7	78.0	76.9	70.1
FY 00	54.8	43.9	37.2	40.0	44.5	48.1	58.7	67.9	76.6	79.1	80.5	68.0
FY 01	58.2	39.5	38.6	37.0	41.6	50.0	54.6	69.4	76.3	79.1	80.0	71.2
FY 02	60.0	48.0	36.4	35.3	38.2	43.5	58.4	62.6	73.9	82.5	76.3	70.5
FY 03	55.9	45.9	39.0	42.4	42.9	49.2	53.6	65.3	75.5	83.4	78.8	70.4
FY 04	60.7	43.0	37.3	35.1	39.4	52.7	56.5	66.4	73.3	79.0	77.0	67.2
FY 05	56.6	44.4	38.5	42.6	44.7	47.8	52.6	66.7	71.6	80.0	77.5	66.6

TABLE A-29. Spangdahlem F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98												1
FY 99												
FY 00												
FY 01												
FY 02												
FY 03												
FY 04												
FY 05												

TABLE A-30. Spangdahlem F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	483.3	455.1	482.1	250.1	475.8	590.1	591.4	324.9	386.8	401.9	454.6	326
FY 97	439.4	363	180.6	255.9	526.5	420.1	397.1	629.9	382.8	459.5	510.5	439.9
FY 98	513	371.5	226.8	372.5	406.4	401.4	871.7	850.8	340.1	375.8	336.6	960.3
FY 99	206.9	197.5	79.9	91.9	45.2	10.9	0	0	0	0	0	0
FY 00	0	0	0	0	0	0	0	0	0	0	0	0
FY 01	0	0	0	0	0	0	0	0	0	0	0	0
FY 02	0	0	0	0	0	0	0	0	0	0	0	0
FY 03	0	0	0	0	0	0	0	0	0	0	0	0
FY 04	0	0	0	0	0	0	0	0	0	0	0	0
FY 05	0	0	0	0	0	0	0	0	0	0	0	0

TABLE A-31. Spangdahlem Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	60.9	44.8	34.9	34.3	35.8	44.4	57.2	58.5	69.1	69.5	71.8	60.7
FY 97	55.9	42.6	33.9	32.2	44.5	52.9	54.5	63.4	66.6	72.1	78.3	68.7
FY 98	54.7	45.2	40.0	40.5	46.3	49.0	52.9	66.0	69.5	67.8	72.5	62.2
FY 99	52.3	39.4	39.2	42.2	38.7	49.7	56.5	66.3	68.1	74.8	72.1	71.0
FY 00	54.9	42.1	38.9	38.8	44.2	47.9	58.0	66.6	72.1	66.4	74.0	65.5
FY 01	54.3	47.2	43.3	39.2	43.8	46.3	52.1	66.7	66.1	72.9	73.3	56.8
FY 02	61.5	45.0	37.1	37.4	46.0	50.8	57.6	65.4	72.2	71.7	72.6	63.5
FY 03	54.8	48.1	40.5	34.9	39.7	51.2	57.6	58.7	77.1	74.9	85.4	67.1
FY 04	49.3	48.8	38.3	37.1	40.5	47.2	57.8	62.8	68.5	70.0	72.9	64.3
FY 05	56.6	44.0	35.3	40.2	34.6	48.4	56.9	62.4	74.6	72.4	68.2	69.0

TABLE A-32. Spangdahlem Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	46.9	34.3	28.2	27.2	26.3	30.2	37.6	43.3	50.0	50.7	53.4	45.6
FY 97	41.2	36.8	27.1	23.3	35.0	37.7	35.8	45.2	51.0	53.7	57.5	48.0
FY 98	40.3	36.1	33.2	31.9	31.2	35.6	40.1	48.4	51.7	52.5	51.9	51.7
FY 99	42.6	31.1	31.9	33.8	29.4	35.7	41.0	47.2	49.2	58.8	54.4	54.1
FY 00	41.4	33.0	31.7	30.9	33.4	36.2	40.1	49.1	50.2	51.6	54.2	52.1
FY 01	44.8	40.6	37.1	32.1	34.8	37.2	39.6	51.9	50.7	58.4	56.7	47.5
FY 02	49.9	35.7	30.3	30.0	38.1	36.2	40.3	48.9	57.0	58.6	57.8	49.3
FY 03	43.7	41.9	35.0	27.5	29.3	43.6	48.0	51.7	62.9	63.2	71.5	54.6
FY 04	40.8	41.5	32.1	32.0	33.1	35.3	44.0	48.6	53.7	56.4	60.2	54.0
FY 05	46.9	38.5	28.9	33.5	27.9	36.1	44.9	47.4	55.7	60.1	54.4	53.5

TABLE A-33. Tyndall F-15C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96		1			1	1	1			1		
FY 97												
FY 98												
FY 99									1			
FY 00									1			
FY 01								2				
FY 02										1		
FY 03	1						1	1		1	1	1
FY 04	1							1			1	
FY 05	1		1									

TABLE A-34. Tyndall F-15C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1299	1372	1155	1320	1239	1269	1473	1569	1509	1449	1447	1043
FY 97	1223	1114	1014	1020	950.8	1263	1380	1266	1037	1064	1056	834.6
FY 98	1196	1034	1193	1180	1144	1495	1452	1272	1263	1189	1234	3851
FY 99	1346	1039	1195	1051	1176	1242	1417	1180	1240	1215	1245	927.4
FY 00	991.2	837.7	978.2	938.5	949.6	924.1	912.1	1176	1073	925.9	1093	838.3
FY 01	1074	871.6	669.9	885.6	893.9	992.4	954.2	1018	948.4	908.1	1197	762
FY 02	1035	820.5	690.8	894.6	1106	963.8	1031	995.8	1048	1034	926.3	808.3
FY 03	1044	870.8	830.4	951.5	886.5	881.7	1055	1013	1149	950	1089	999.7
FY 04	1078	858.6	893.7	1015	892.1	1147	1152	1038	1070	895.1	959.1	853
FY 05	929	970.7	935.6	912.9	784.3	1026	1007	1011	1103	855.5	1127	768.6

TABLE A-35. Tyndall Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	79.4	68.1	61.5	63.0	63.7	64.4	72.4	84.1	86.8	88.7	87.2	85.4
FY 97	77.9	72.0	66.7	64.5	67.2	75.9	74.3	79.8	85.0	88.7	89.3	89.2
FY 98	79.8	68.5	61.8	65.4	64.2	67.2	75.1	84.8	90.6	90.5	91.4	85.6
FY 99	83.1	74.5	69.6	66.9	67.3	68.9	77.5	81.3	85.6	88.4	89.9	86.5
FY 00	80.0	73.2	64.2	63.5	68.9	74.4	75.5	84.3	88.6	91.9	90.5	86.4
FY 01	80.3	70.2	62.2	60.0	69.5	67.5	77.7	83.6	86.8	88.4	88.4	85.7
FY 02	79.6	77.7	69.5	63.9	65.2	71.8	80.0	84.5	87.5	90.7	89.2	87.9
FY 03	83.3	69.9	64.1	60.6	66.0	72.9	76.3	84.1	86.4	87.5	88.6	86.9
FY 04	79.6	75.6	64.4	62.7	61.7	73.9	75.9	83.7	87.3	88.4	88.1	85.4
FY 05	81.1	74.2	63.8	65.1	65.1	67.7	72.3	80.3	85.6	87.2	86.8	88.4

TABLE A-36. Tyndall Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	63.6	49.6	43.7	41.5	45.9	48.1	56.1	67.3	72.2	76.5	73.3	71.1
FY 97	60.9	52.9	48.4	46.9	51.5	60.0	58.5	65.9	71.8	76.0	75.0	71.7
FY 98	62.3	51.3	46.6	48.0	47.9	49.8	59.6	70.0	76.4	76.9	75.7	73.7
FY 99	64.9	58.9	53.6	48.0	51.3	50.9	63.1	66.7	72.8	75.5	77.8	71.1
FY 00	62.9	53.4	46.1	46.2	48.8	56.1	57.9	68.4	73.2	76.2	75.5	71.2
FY 01	58.8	52.8	41.8	41.0	51.9	52.4	59.4	66.3	73.6	76.4	75.1	69.0
FY 02	60.3	57.9	52.4	48.0	45.0	51.9	65.4	67.7	73.6	76.1	74.3	75.0
FY 03	69.3	50.8	45.2	41.6	47.9	58.3	60.1	71.9	74.8	75.4	75.6	71.4
FY 04	63.4	56.7	44.4	45.1	46.9	53.7	57.0	67.9	75.3	76.6	75.8	72.9
FY 05	68.8	60.5	47.8	50.6	53.0	55.0	58.1	67.8	74.7	77.5	76.4	73.6

APPENDIX B
F-15E RAW DATA

TABLE B-1. Elmendorf F-15E Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97			1									
FY 98												
FY 99												
FY 00	1										1	
FY 01												
FY 02												
FY 03												
FY 04												
FY 05										1		

TABLE B-2. Elmendorf F-15E Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	578.7	536.5	470.8	442	348.3	587.4	639.5	638.1	596.2	636.9	574.9	356.5
FY 97	588.2	580.2	431.7	423.6	507	607.6	687.4	511.5	593.8	629.3	450.1	466.3
FY 98	528.2	453	342.3	439.8	534.8	632.5	596.4	565.8	344.8	523.8	621.5	1003
FY 99	613.4	477.9	456.7	371.6	401.8	614.6	598.2	487	555.5	527.5	386.8	510
FY 00	474.7	558.6	374.9	448.1	656.1	767	586.1	540.3	604	610.7	639.3	244.5
FY 01	571.2	436.8	442	522.8	411.8	634.3	585.8	677	588.6	650	712.2	364.3
FY 02	588.2	559	461	437.3	498.9	530.1	623.5	670.3	509.1	650.5	657.7	314.3
FY 03	421.5	329.2	324.3	455.8	425.2	561.1	616.7	567.6	368.9	589.1	616.5	424.8
FY 04	630.8	466.3	362.5	341.2	635.3	625.7	632.1	669.1	549.8	484.9	565.7	537.2
FY 05	562.8	510.1	589.2	353.5	530.3	610.7	513.1	446.9	444.4	419.8	613.2	388.3

TABLE B-3. Elmendorf Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	43.4	28	22.5	11.1	23.0	39.4	48.6	60.4	67.1	67.4	64.6	53.1
FY 97	34.3	24.0	16.6	19.3	33.8	35.0	49.2	60.7	69.5	69.2	66.1	58.2
FY 98	35.3	31.5	22.9	19.9	34.2	39.6	46.7	53.2	63.9	66.4	60.7	58.1
FY 99	46.2	29.2	18.8	17.6	18.1	35.7	45.5	57.1	66.7	67.7	65.6	57.8
FY 00	40.7	26.6	21.3	21.9	36.2	41.2	50.7	57.9	67.5	65.7	64.9	56.8
FY 01	42.8	36.5	30.6	34.6	33.0	39.3	47.5	53.8	70.2	65.4	67.8	58.9
FY 02	36.7	24.8	16.6	30.3	30.0	33.5	43.6	61.1	64.7	70.3	65.8	57.8
FY 03	47.7	39.9	29.4	26.4	35.8	35.8	49.6	58.6	66.8	72.7	66.4	57.8
FY 04	47.0	28.1	21.4	14.9	33.7	34.9	47.4	62.3	69.8	72.4	74.3	54.2
FY 05	45.0	34.0	27.6	24.2	29.7	41.3	53.4	64.4	70.1	73.1	69.4	59.3

TABLE B-4. Elmendorf Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	31.6	10.8	8.9	-6.4	6.3	17.2	29.8	40.7	47.7	52.9	48.5	37.3
FY 97	14.5	11.1	-0.3	3.8	20.5	12.1	29.2	42.1	52.1	54.8	50.9	42.9
FY 98	20.4	20.0	7.4	3.7	15.2	19.5	29.4	39.1	49.3	51.6	48.5	42.9
FY 99	29.2	15.5	5.6	2.8	-2.5	16.0	28.4	38.8	48.7	52.4	51.5	43.8
FY 00	28.7	9.9	6.5	8.1	19.2	23.3	30.3	37.4	48.8	52.0	48.2	40.9
FY 01	29.3	24.3	18.5	21.4	16.7	24.1	30.3	37.1	51.5	53.6	53.0	42.8
FY 02	23.5	10.7	-0.6	18.4	11.6	9.8	23.4	41.0	48.5	54.0	51.5	44.2
FY 03	35.7	27.9	16.8	13.1	27.1	18.8	30.5	40.2	50.3	56.1	51.3	40.6
FY 04	33.9	15.7	7.3	-4.0	16.8	17.3	30.7	44.0	51.1	55.7	53.2	38.4
FY 05	32.9	22.1	14.3	8.4	10.9	25.7	31.8	44.2	51.1	56.4	52.7	46.5

TABLE B-5. Lakenheath F-15E Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96					1							
FY 97									1			
FY 98												
FY 99												
FY 00				1								
FY 01									1			
FY 02												
FY 03			1					1				
FY 04				1				1	1			
FY 05		1										

TABLE B-6. Lakenheath F-15E Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1250	1273	940.8	1125	1142	1258	1096	1573	1202	1586	1267	1044
FY 97	1474	1258	1036	1200	1319	1552	1448	1149	1318	1578	1253	931.9
FY 98	1168	1679	1635	1195	878.2	890	855.7	999.1	1099	1318	1449	3346
FY 99	954	1048	1223	1361	1154	1561	2026	2178	931	491.8	1307	1125
FY 00	1006	1043	858.3	1325	1334	1472	1204	1340	1605	1211	1354	983.8
FY 01	995.2	1202	1082	1409	1291	1155	1281	1502	1398	1554	1730	970.4
FY 02	1294	1212	827.4	1075	1167	1195	1391	1314	1227	1442	1753	1100
FY 03	1458	909.2	998.5	1238	947.5	1084	1404	1422	1236	1616	1940	1647
FY 04	1821	1647	1057	846.5	900.8	2003	2465	2472	1655	1047	1084	879
FY 05	1240	1200	1024	1369	2208	2557	2115	1992	1017	1201	1194	1129

TABLE B-7. Lakenheath Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	57.5	47.0	38.3	41.1	40.4	42.0	50.3	52.8	61.0	68.1	66.1	58.4
FY 97	55.2	45.8	39.8	37.6	48.9	50.1	49.2	58.4	61.4	68.1	72.6	61.7
FY 98	52.6	51.4	45.4	43.1	47.0	49.9	52.9	60.4	63.9	65.6	67.2	66.9
FY 99	53.0	44.2	43.6	45.1	43.6	49.0	50.3	57.1	59.3	71.3	64.1	67.2
FY 00	53.9	49.0	43.0	44.7	46.3	48.0	51.2	57.4	68.1	65.9	70.9	66.6
FY 01	56.5	46.5	47.7	40.3	41.4	45.8	49.4	60.6	62.8	70.6	72.9	61.9
FY 02	61.8	47.6	43.4	46.1	48.5	48.5	53.5	58.3	63.6	60.2	66.2	62.0
FY 03	55.9	49.6	43.7	39.0	39.9	50.0	51.4	54.5	64.7	65.4	68.0	64.0
FY 04	49.7	49.8	44.6	43.2	45.9	46.7	50.5	58.8	63.8	65.5	68.5	62.6
FY 05	55.6	48.8	43.6	44.8	40.8	45.5	50.2	56.3	68.5	65.1	61.7	63.6

TABLE B-8. Lakenheath Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	52.2	43.7	35.3	38.3	34.4	37.7	44.6	45.2	55.2	60.9	58.4	53.6
FY 97	50.4	40.4	36.1	33.2	42.5	44.9	42.7	49.1	54.8	58.9	63.0	54.0
FY 98	47.3	46.9	41.1	38.5	43.2	44.4	44.4	51.3	55.8	57.1	58.0	56.1
FY 99	48.5	39.3	40.0	40.7	38.6	42.7	45.4	52.7	52.7	65.6	60.5	57.9
FY 00	49.1	43.5	37.6	38.3	40.9	42.0	43.3	50.3	56.7	59.6	61.7	59.8
FY 01	50.3	43.2	44.9	37.6	37.5	41.4	45.1	51.3	59.4	63.5	63.0	53.5
FY 02	55.5	42.7	37.9	42.1	44.4	45.4	47.2	53.9	59.2	58.4	61.9	57.2
FY 03	52.8	46.4	41.3	36.4	38.5	44.6	48.7	49.6	61.1	63.1	66.2	57.2
FY 04	49.1	49.0	41.7	39.4	43.9	43.2	47.3	53.6	59.0	60.6	63.4	60.8
FY 05	53.2	46.4	40.7	41.8	37.4	43.0	47.0	51.2	63.7	62.1	57.9	61.1

TABLE B-9. Mountain Home F-15E Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98												
FY 99	1											
FY 00												
FY 01												
FY 02												
FY 03		1					1					
FY 04												
FY 05												

TABLE B-10. Mountain Home F-15E Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	455.6	578.2	391.8	476.5	477.5	657.5	524.6	597.7	445.7	632.8	483.9	595.1
FY 97	598.4	373.4	431.6	436.6	363.6	955.3	970.8	872.2	508.4	301.8	396.8	292
FY 98	678.1	249	426.9	381.6	455	368.7	637.6	458.9	441	427.1	421.4	1277
FY 99	400.9	383.2	402.5	504.5	515.7	570.9	492.2	380.2	427.5	387.2	393	402.4
FY 00	366.6	368.4	455.5	537	618.3	518	501.5	491.3	615.1	453.8	550.3	466
FY 01	442.3	347.1	363.6	518.8	385.4	529.8	512.9	499.2	410.6	567.9	503.7	289.2
FY 02	845.2	1234	1045	532.8	496.9	452.2	438	449.4	542.5	451.7	487.9	528.4
FY 03	451.9	418.6	347.2	432.8	568.5	505.4	513.1	467.1	613.3	696.9	542.2	570.3
FY 04	559.2	507.4	1549	1511	1605	993.3	606	511.4	710.4	529	621.2	429
FY 05	487.1	451.8	489.2	496.4	609.8	684.4	661.8	542.5	463.6	459	550.5	341.1

TABLE B-11. Mountain Home Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	64.2	53.4	39.7	38.9	43.5	55.4	61.5	68.0	83.7	94.7	92.3	77.5
FY 97	64.9	50.5	40.0	40.0	46.1	59.0	61.5	77.9	83.1	90.5	93.7	83.5
FY 98	66.1	52.8	39.0	45.5	47.2	54.9	60.5	67.7	77.8	96.9	95.3	84.1
FY 99	65.7	51.9	38.8	42.3	44.3	54.6	59.8	70.0	82.4	93.3	93.1	80.9
FY 00	71.1	58.2	36.9	40.4	50.6	54.7	69.8	75.0	87.0	94.9	95.0	79.3
FY 01	64.8	40.5	35.5	36.4	43.6	58.9	61.9	80.4	85.6	92.4	96.1	85.1
FY 02	67.7	54.5	35.1	36.2	44.5	54.6	64.0	72.2	81.2	95.7	86.8	81.4
FY 03	63.8	51.8	42.2	44.2	46.6	56.6	61.2	71.8	85.9	101.3	94.2	80.8
FY 04	73.8	45.6	42.3	32.4	38.5	60.1	66.1	71.2	84.0	97.1	90.8	79.1
FY 05	65.5	46.0	42.2	39.6	47.2	57.5	63.0	69.2	80.4	99.9	94.8	82.8

TABLE B-12. Mountain Home Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	34.3	32.7	25.8	23.8	23.7	31.7	36.2	42.1	49.8	61.8	57.7	46.2
FY 97	37.1	29.4	27.0	25.6	25.5	30.6	34.7	46.0	51.7	56.2	57.3	52.4
FY 98	37.2	30.9	20.7	29.4	30.1	32.5	35.7	43.9	47.8	61.0	58.4	54.0
FY 99	36.1	32.7	21.8	26.5	28.0	30.7	33.7	41.3	51.7	55.4	57.5	45.6
FY 00	36.7	35.6	24.1	25.9	32.5	30.4	39.7	47.8	53.3	58.7	57.9	47.2
FY 01	39.2	22.5	24.0	21.3	25.6	33.3	34.9	46.6	53.5	60.0	63.3	53.4
FY 02	40.3	33.6	24.5	24.6	23.9	31.8	38.1	46.6	50.4	65.3	57.3	48.2
FY 03	33.7	29.9	28.3	31.7	25.8	36.4	40.0	45.7	56.6	65.8	61.8	49.1
FY 04	44.7	27.6	30.3	23.5	27.3	33.1	38.4	45.5	54.2	63.1	59.5	46.5
FY 05	40.0	30.1	28.7	25.7	25.6	34.1	39.3	48.2	50.5	64.1	59.3	48.1

TABLE B-13. Nellis F-15E Pilot Human Factors Mishaps (none)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98												
FY 99												
FY 00												
FY 01												
FY 02												
FY 03												
FY 04												
FY 05												

TABLE B-14. Nellis F-15E Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	256.5	269.8	219.7	262	225.3	259.8	247.7	224.6	229.8	246.1	242	200.8
FY 97	219.8	142.7	142.9	184.2	192.5	241.3	201	207.8	236.4	227.3	241	165.4
FY 98	219.4	174.8	229.4	229.4	148.3	260.7	178	186.4	244.6	203.7	205.5	578.7
FY 99	238.5	187	198.9	139.6	208.9	247.3	204.7	193.6	159.6	195.3	191.5	227.9
FY 00	204.4	173	157.3	195.7	191.9	245.3	236.2	231.7	246.9	167.6	213.6	250.8
FY 01	211	225.4	166.8	227.4	209	254.3	226.9	214.4	179.2	271.5	267.6	183.2
FY 02	213.1	193.9	180.8	227.4	216.5	242.8	308.4	180.5	207.4	210.9	209.9	219.3
FY 03	217.4	178.2	141.2	199.9	178	227.6	219.4	197.4	205.1	220.2	190.2	214.6
FY 04	191.8	168.1	204.8	233.3	178.8	277.6	230.9	204.5	174.9	189.4	192.5	198.8
FY 05	152.9	157.4	146.2	257.6	192.6	277.6	191.4	170.8	212.6	168.5	213.1	223.7

TABLE B-15. Nellis Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	86.0	75.0	62.2	63.3	68.8	75.4	84.9	93.9	104.8	109.3	108.2	96.1
FY 97	83.2	69.7	58.8	59.5	65.2	78.9	80.1	96.6	98.7	104.3	105.1	95.5
FY 98	82.9	69.3	58.4	61.0	59.8	70.9	75.0	85.2	95.1	106.8	105.3	93.4
FY 99	80.9	67.5	60.7	63.4	66.6	75.3	74.8	89.3	99.8	102.7	103.4	96.8
FY 00	88.3	73.7	61.8	62.9	66.1	72.1	86.5	96.7	103.8	106.7	103.5	97.2
FY 01	81.1	62.5	62.2	56.9	61.8	73.2	78.5	97.7	104.8	106.2	105.3	98.4
FY 02	85.0	69.9	55.9	57.6	66.7	70.3	83.7	89.7	102.4	107.5	104.1	96.6
FY 03	80.9	69.3	58.3	67.1	62.8	72.1	75.9	90.8	101.4	107.4	102.5	98.5
FY 04	89.4	62.9	58.0	58.6	58.4	79.4	81.0	91.7	101.0	105.0	101.6	94.3
FY 05	78.2	63.8	58.3	59.0	61.9	69.9	78.3	91.1	97.8	107.5	100.7	94.3

TABLE B-16. Nellis Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	54.3	45.4	37.7	36.0	43.5	47.6	56.3	65.0	72.6	82.0	79.9	69.7
FY 97	54.6	46.5	38.6	39.8	41.0	47.1	54.1	68.1	74.3	75.9	78.6	72.6
FY 98	53.7	45.0	36.0	38.3	42.8	46.5	50.8	58.9	69.0	77.6	80.3	68.3
FY 99	54.2	43.0	36.7	36.8	40.0	48.6	51.3	63.4	70.7	78.0	76.9	70.1
FY 00	54.8	43.9	37.2	40.0	44.5	48.1	58.7	67.9	76.6	79.1	80.5	68.0
FY 01	58.2	39.5	38.6	37.0	41.6	50.0	54.6	69.4	76.3	79.1	80.0	71.2
FY 02	60.0	48.0	36.4	35.3	38.2	43.5	58.4	62.6	73.9	82.5	76.3	70.5
FY 03	55.9	45.9	39.0	42.4	42.9	49.2	53.6	65.3	75.5	83.4	78.8	70.4
FY 04	60.7	43.0	37.3	35.1	39.4	52.7	56.5	66.4	73.3	79.0	77.0	67.2
FY 05	56.6	44.4	38.5	42.6	44.7	47.8	52.6	66.7	71.6	80.0	77.5	66.6

TABLE B-17. Seymour Johnson F-15E Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96						1						
FY 97				1						1		
FY 98												1
FY 99									1			
FY 00	2					1				1		
FY 01					1	1					1	
FY 02	1											
FY 03			1		1							
FY 04	1											
FY 05					1							

TABLE B-18. Seymour Johnson F-15E Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	0	34.1	2106	2643	2449	2402	2756	2467	2305	2821	2460	1596
FY 97	2342	2002	2002	1940	2103	2824	2768	2562	3000	2277	2729	1836
FY 98	2176	1762	1819	1740	1835	2834	2563	1965	2030	2643	2481	5118
FY 99	2110	1786	1952	2202	2116	2470	2256	1991	1954	2016	2290	1825
FY 00	2153	1955	1955	1351	2276	2410	2197	2379	2176	2091	2914	1774
FY 01	1961	1736	1702	2031	2103	2482	2455	2297	2383	2237	2457	1533
FY 02	2883	2927	2738	2670	2471	2701	2432	2208	2043	2016	2052	2365
FY 03	2025	2095	1953	1983	2573	6242	6229	3850	2712	2583	2179	1801
FY 04	2268	1920	1948	1952	2026	2911	2366	1896	2928	3387	3444	2953
FY 05	3154	3212	3191	3255	1921	2390	2271	1945	1895	2093	2588	1517

TABLE B-19. Seymour Johnson Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	76	60.5	51.2	50.2	54.4	58.5	73.5	82.6	88.0	88.0	84.3	81.5
FY 97	73.9	59.0	58.1	54.5	60.8	71.7	73.3	82.6	87.7	94.8	92.3	86.4
FY 98	76.7	64.8	57.1	60.7	61.7	67.6	76.3	84.8	92.0	92.9	91.9	89.4
FY 99	79.1	69.1	61.1	63.6	63.8	64.6	75.7	79.1	83.5	89.4	89.5	80.6
FY 00	74.0	70.2	58.1	51.9	61.5	67.9	71.2	85.4	86.9	85.2	86.1	80.8
FY 01	75.5	61.7	47.5	55.2	60.7	61.9	74.9	81.4	85.7	85.2	88.0	79.2
FY 02	74.7	71.9	63.9	56.5	61.4	70.2	80.6	82.1	91.4	92.7	91.5	85.4
FY 03	74.1	64.3	52.2	48.4	53.3	67.4	68.5	77.8	85.9	86.8	88.3	81.5
FY 04	71.5	71.5	54.6	48.1	52.8	65.9	74.0	84.0	86.4	91.1	84.4	81.9
FY 05	70.6	66.0	57.8	55.7	56.1	61.2	72.8	77.2	85.7	91.3	90.6	86.8

TABLE B-20. Seymour Johnson Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	55.9	39.3	31.2	32.5	34.7	38.6	50.5	60.7	68.0	71.6	68.3	64.7
FY 97	52.9	38.9	39.3	37.4	41.7	48.5	51.6	59.1	67.2	74.3	70.6	67.4
FY 98	56.1	47.0	42.1	44.5	44.7	48.6	56.1	65.3	73.0	74.7	73.4	69.1
FY 99	55.9	48.9	45.0	43.5	42.5	41.3	53.6	58.6	67.5	73.0	72.0	65.7
FY 00	54.6	49.1	38.5	34.6	38.9	47.0	51.4	62.2	68.9	69.4	69.2	65.2
FY 01	50.5	42.9	31.6	35.3	40.8	43.3	51.6	60.1	69.7	69.4	69.7	62.0
FY 02	50.4	48.2	45.1	38.8	39.7	48.1	58.4	60.2	69.9	73.5	71.5	68.8
FY 03	59.0	46.3	35.6	31.6	37.0	48.4	51.5	61.7	69.5	71.8	72.3	64.4
FY 04	54.9	52.9	36.0	29.5	35.6	46.9	52.4	65.6	70.0	71.2	66.7	64.3
FY 05	50.8	45.3	37.0	37.0	38.5	40.6	50.8	56.4	68.6	74.4	72.4	68.8

APPENDIX C
F-16C RAW DATA

TABLE C-1. Aviano F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97						1						
FY 98												
FY 99												
FY 00												
FY 01												
FY 02												
FY 03												
FY 04												
FY 05												

TABLE C-2. Aviano F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	980.8	719.8	813.7	1156	1022	1034	1029	1095	973.4	921.4	961.3	801.2
FY 97	1048	979.2	770.1	841.4	853.7	1129	1178	1048	903.3	1022	1050	1113
FY 98	974.7	658.3	845.8	964.4	805.4	1055	702.5	714.8	1188	998.4	1058	3045
FY 99	1211	1129	920.6	1143	941.6	2310	4392	3986	1810	635.8	1077	838.7
FY 00	728.3	940.8	888.8	1074	862	1029	826.2	1180	819.4	915.5	1240	814.1
FY 01	789.9	775	646.6	804.6	996.5	1055	1058	991.7	1266	1091	1251	882
FY 02	1148	1004	593.8	769.8	836.2	1098	1241	1218	1054	993.2	1278	963.1
FY 03	1202	847.4	862.3	873.2	1153	973.4	960.5	1035	1001	1120	807.5	883.5
FY 04	1337	958.7	2144	2111	2021	1963	2398	2170	1037	995.5	805.5	789.9
FY 05	1213	1175	1010	1003	996.7	1147	898.2	1666	1654	1893	1740	1495

TABLE C-3. Aviano Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	70.0	53.1	46.5	46.2	44.9	51.8	63.9	71.8	81.3	80.3	80.9	69.4
FY 97	63.2	54.7	45.7	48.5	51.4	62.7	60.7	72.9	76.9	81.3	82.8	79.2
FY 98	64.9	54.5	47.7	47.3	56.9	56.1	60.6	73.8	79.8	84.3	87.3	74.1
FY 99	63.3	51.7	45.9	48.3	47.0	56.2	62.6	71.9	77.8	83.4	82.1	77.5
FY 00	64.6	52.3	44.0	43.2	49.8	54.5	65.2	72.0	81.0	78.0	84.9	75.2
FY 01	65.4	54.9	48.2	46.4	51.4	55.3	60.9	75.3	76.5	80.4	84.8	68.6
FY 02	68.2	53.5	43.9	44.6	48.9	61.7	65.8	70.9	80.5	81.5	80.4	72.7
FY 03	64.1	57.1	47.2	44.3	45.7	58.2	61.0	77.8	86.8	84.9	91.7	74.5
FY 04	60.2	56.6	49.3	42.4	45.1	53.5	63.2	67.5	78.5	82.9	83.1	74.6
FY 05	63.9	56.3	51.9	43.9	44.9	53.4	60.2	71.7	79.7	82.1	78.1	75.3

TABLE C-4. Aviano Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	50.1	38.4	36.0	34.6	29.0	34.7	46.9	54.8	62.3	62.4	62.5	53.7
FY 97	49.5	43.5	34.4	35.1	33.5	40.9	41.5	55.7	61.4	62.7	64.8	57.6
FY 98	48.9	41.5	36.5	34.3	34.0	36.5	46.9	55.3	62.2	65.2	66.1	57.7
FY 99	48.6	34.8	28.9	30.0	28.9	38.9	46.9	56.1	58.7	65.3	66.0	60.4
FY 00	50.5	38.3	30.5	25.7	31.8	38.5	49.6	57.7	67.4	65.1	68.5	57.6
FY 01	54.1	44.5	37.4	35.6	33.8	44.1	44.2	59.5	59.6	66.4	67.7	54.1
FY 02	54.1	37.4	24.8	27.1	36.3	41.8	46.7	57.0	65.2	66.2	64.1	56.8
FY 03	50.9	46.5	36.6	29.7	25.4	37.0	44.8	58.4	69.0	65.5	70.2	55.6
FY 04	46.0	44.8	34.8	28.9	32.6	38.8	48.8	52.1	63.7	66.9	65.5	55.5
FY 05	53.7	40.5	33.7	28.4	26.9	35.7	45.5	57.0	65.9	68.8	65.6	61.0

TABLE C-5. Cannon F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98		1										1
FY 99												
FY 00												
FY 01												
FY 02												1
FY 03										1		
FY 04	1	1										
FY 05												

TABLE C-6. Cannon F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	40.8	49.3	71.8	166.8	226.5	466.3	463.3	630.7	592.5	643.7	814.1	1409
FY 97	1231	1068	1097	1201	1100	1202	1548	1432	1517	1301	1102	968.4
FY 98	1548	1128	985.8	1603	1639	1698	1571	1361	1233	1133	1364	3416
FY 99	1314	1210	1302	1215	1222	1629	1143	1198	1415	1256	1181	1087
FY 00	1272	1334	1127	1370	1276	1236	1417	1434	1363	1469	1890	1658
FY 01	1587	1399	1120	1241	1291	1167	1473	1728	1493	1214	1656	923.8
FY 02	1591	1415	2092	1809	2026	1674	1875	1803	1998	1257	2475	1124
FY 03	1535	1247	2180	1758	1290	2657	1631	1348	1869	1258	1208	1455
FY 04	1612	1276	1268	1597	1391	1926	1388	1541	1514	1066	1440	871.9
FY 05	1146	911.7	1501	1504	1299	1478	1313	1018	1144	1105	1518	803.9

TABLE C-7. Cannon Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	76	66	54.4	54.9	61.0	63.5	74.8	90.8	90.8	88.8	86.0	79.9
FY 97	71.0	62.1	58.4	42.7	51.5	71.5	64.2	79.5	88.6	93.2	89.5	86.4
FY 98	72.6	58.6	47.4	56.1	54.3	63.2	71.2	87.8	96.9	95.0	88.4	90.7
FY 99	75.1	62.3	55.1	57.6	65.7	65.3	71.0	78.4	87.2	89.6	89.5	82.2
FY 00	75.9	69.6	53.9	60.9	67.9	68.0	78.1	90.5	87.3	93.5	94.5	90.9
FY 01	68.9	53.8	47.6	45.4	59.2	61.3	78.4	82.2	93.1	95.9	89.2	85.4
FY 02	77.4	62.5	55.7	56.1	57.0	67.3	77.7	87.4	94.0	91.0	93.4	81.6
FY 03	68.0	57.9	48.4	56.0	55.2	66.6	73.6	84.1	84.1	94.2	93.1	86.3
FY 04	77.8	62.5	55.6	53.3	49.9	68.6	69.0	86.9	89.1	88.4	84.0	78.8
FY 05	71.8	52.8	54.8	57.7	53.8	61.1	73.6	78.7	91.3	89.9	86.0	84.6

TABLE C-8. Cannon Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	45.1	36.0	28.5	23.3	30.9	30.4	41.7	56.9	62.9	66.3	64.1	55.6
FY 97	42.9	33.8	25.7	22.9	27.7	36.1	39.2	51.1	59.9	64.4	63.0	60.0
FY 98	46.1	32.5	25.8	29.7	31.2	32.0	38.9	53.6	60.7	67.0	64.4	61.7
FY 99	50.2	39.9	29.2	30.8	33.1	36.7	43.0	50.7	59.9	64.8	64.9	56.4
FY 00	45.1	37.7	27.6	29.1	33.6	37.4	44.3	55.5	61.5	66.1	66.2	58.3
FY 01	48.7	31.4	24.6	27.3	30.9	35.8	45.4	53.2	61.4	67.7	64.2	57.5
FY 02	45.7	40.0	27.0	27.9	27.9	31.5	47.3	52.1	66.6	68.3	65.4	57.7
FY 03	47.5	35.4	30.3	30.0	31.7	42.6	43.0	51.0	58.5	65.6	66.4	57.3
FY 04	53.6	39.1	31.1	31.7	26.7	42.5	46.0	59.0	61.6	64.1	61.1	55.8
FY 05	50.4	37.3	30.8	33.8	33.5	38.5	45.0	54.6	65.4	67.1	65.7	62.1

TABLE C-9. Eielson F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97								1				
FY 98												
FY 99												
FY 00												
FY 01												
FY 02												
FY 03												
FY 04				1			1					
FY 05									1	1		

TABLE C-10. Eielson F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	492.9	608.5	306.6	397.2	433.4	409.7	679.9	457.8	598.9	626.6	510	266.7
FY 97	522.2	528.2	260.2	420.9	463.8	545.1	552.5	551.3	617.3	561.1	445.3	367.3
FY 98	397.2	334.8	361.9	424.9	330.1	380.4	501.2	294.4	359.8	410.3	448.1	1082
FY 99	545.1	420.1	418	201.5	421.4	517.7	537.2	446.8	574.6	477.9	378.1	352.3
FY 00	346.7	428.5	525.8	203.4	401.3	569.8	478.9	512.8	452.5	333.7	406.1	313.1
FY 01	424.3	443.4	409	499.9	393	575.4	511.4	507.4	602.6	471.5	558.7	276.3
FY 02	356.6	365.9	644.9	1016	840.5	794.1	466.1	519	462.8	553.9	473.9	376.4
FY 03	514.2	445.6	321.6	382.1	413.5	489.8	509.8	571	622.6	517	402.9	290.8
FY 04	464.9	471.4	444.6	541.2	444.8	491.2	602.8	415.7	548.6	478.8	536.2	408.4
FY 05	512.3	438.6	417.7	191.8	486	604.5	490.5	440.7	498.7	395	190.1	306

TABLE C-11. Eielson Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	32.4	1.9	1.6	-11.2	10.3	33.1	48.9	62.9	70.2	73.0	61.6	49.9
FY 97	19.9	3.6	-8.0	-3.3	25.6	19.7	46.6	61.7	73.9	75.0	68.7	61.5
FY 98	26.3	20.5	3.1	-6.2	15.4	36.4	52.5	63.1	69.6	74.0	63.5	56.3
FY 99	37.2	13.8	1.5	-6.1	-4.9	24.2	47.0	58.0	73.9	71.6	68.8	56.3
FY 00	27.2	4.5	-3.2	4.4	20.0	34.9	45.0	55.4	72.6	66.0	60.9	49.8
FY 01	30.4	17.2	10.3	19.9	18.9	25.6	45.5	52.7	71.7	68.3	67.1	60.4
FY 02	30.6	5.2	-3.3	13.1	12.1	29.6	37.5	61.5	68.9	72.0	63.1	57.3
FY 03	39.0	25.5	10.3	6.3	24.0	23.5	46.0	58.3	72.0	71.4	65.9	51.0
FY 04	40.0	16.9	-2.4	-6.8	14.4	21.9	48.4	64.3	77.8	76.4	74.6	49.7
FY 05	38.3	16.3	7.7	-1.2	8.8	33.6	47.0	67.8	72.7	73.8	70.3	56.2

TABLE C-12. Eielson Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	18.4	-11.7	-13.2	-22.4	-9.5	5.3	23.2	37.0	47.6	54.0	43.9	33.4
FY 97	2.6	-9.8	-20.2	-22.8	6.5	-7.6	23.0	38.4	51.3	54.5	51.2	40.2
FY 98	13.8	6.6	-12.1	-19.0	-4.4	8.0	29.2	40.9	49.9	53.4	45.9	38.4
FY 99	17.6	-0.5	-10.7	-21.6	-25.2	-2.6	24.7	36.1	51.1	52.7	48.0	36.3
FY 00	14.4	-7.3	-17.5	-10.6	0.3	8.6	22.8	38.1	53.2	51.7	44.9	35.9
FY 01	15.4	2.3	-7.6	2.2	2.6	1.2	25.8	34.7	50.7	51.8	48.7	34.6
FY 02	16.0	-7.0	-16.8	-0.4	-11.0	-0.9	17.0	39.8	48.7	52.5	45.3	37.2
FY 03	25.1	13.3	1.4	-8.2	6.4	1.1	21.7	37.2	49.6	52.2	46.2	34.0
FY 04	25.2	5.8	-16.0	-23.4	-4.3	-3.1	26.2	43.0	55.4	55.6	50.7	29.8
FY 05	24.2	2.2	-9.5	-16.2	-11.3	13.6	23.0	44.3	53.0	53.7	48.4	40.5

TABLE C-13. Hill F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96		1	1	1								
FY 97												
FY 98				1		1						
FY 99		1						1				
FY 00											1	
FY 01							1			1		
FY 02			1	1								
FY 03	1	1	1								1	
FY 04			1									
FY 05									1			

TABLE C-14. Hill F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1434	1323	1114	942.3	1171	1637	1641	2095	1484	1754	1769	1328
FY 97	1157	1385	1223	974.1	1194	1206	1142	1341	1432	1324	1022	1769
FY 98	1575	1713	1404	1550	798.5	1175	1367	1409	1452	1053	1188	4001
FY 99	1153	1279	854.9	1079	908.1	1214	1125	1074	1336	1232	1359	1032
FY 00	1272	1140	1068	1010	1126	1245	1319	1375	1218	1179	1715	1072
FY 01	1277	1162	970.2	1345	994.8	2016	1575	1464	1567	1350	1715	1047
FY 02	1699	1341	1113	1203	1901	1475	1220	1464	1542	1293	1619	1177
FY 03	1884	1441	897.1	1566	1023	2667	2364	1438	2212	2296	1934	1389
FY 04	1595	1189	1370	1338	1478	2184	1937	2100	1995	1625	1769	2088
FY 05	2311	2053	2255	2247	2011	2453	2264	1494	1054	1073	1654	872.1

TABLE C-15. Hill Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	61.8	54.4	42.2	37.8	38.5	52.5	60.8	69.7	84.8	89.2	88.3	73.6
FY 97	60.7	48.3	39.2	35.0	37.8	53.3	54.3	71.3	78.4	84.7	86.0	76.1
FY 98	61.7	47.0	31.7	39.9	40.2	47.3	58.1	69.5	71.7	89.3	86.1	77.4
FY 99	59.3	49.0	35.8	39.4	43.6	53.1	53.2	67.2	77.5	87.7	85.8	74.7
FY 00	66.4	55.2	36.8	38.9	45.3	49.3	64.6	71.3	82.6	91.6	88.9	74.8
FY 01	60.8	36.5	35.7	34.3	37.6	52.1	58.5	73.6	82.4	90.8	90.3	81.0
FY 02	64.5	50.1	32.3	33.7	36.0	46.9	63.2	72.0	85.5	94.8	86.4	74.1
FY 03	56.7	43.9	40.0	44.3	40.5	52.8	60.1	72.9	82.1	96.2	89.8	76.1
FY 04	69.4	41.4	39.5	26.9	34.3	56.3	61.4	70.8	79.9	87.6	83.8	76.1
FY 05	61.7	46.8	37.2	38.6	41.3	49.9	59.2	68.3	75.2	91.3	84.7	74.4

TABLE C-16. Hill Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	40.9	36.8	29.3	26.0	24.9	33.7	40.9	50.7	59.2	64.2	61.7	50.8
FY 97	40.8	33.1	26.7	23.2	24.9	32.6	36.3	49.2	56.8	60.5	63.7	55.5
FY 98	41.1	32.5	20.0	28.0	28.5	30.2	38.7	47.5	51.3	65.2	63.9	56.9
FY 99	42.0	34.2	21.0	26.6	27.7	34.7	35.7	46.3	56.2	63.8	63.2	50.7
FY 00	42.7	37.0	24.0	27.5	31.1	32.1	43.0	49.4	57.3	65.7	65.9	53.2
FY 01	43.4	24.3	23.4	20.4	25.1	34.7	39.6	50.8	57.8	67.7	67.1	58.4
FY 02	45.9	36.8	20.8	20.4	19.9	29.4	41.6	48.8	59.1	68.1	60.7	53.7
FY 03	39.3	29.5	29.0	31.6	25.8	35.4	40.1	50.5	57.7	69.4	67.5	54.1
FY 04	46.8	31.1	28.3	16.6	22.7	37.7	43.0	50.1	58.0	66.5	60.5	52.6
FY 05	44.0	32.9	25.6	27.1	26.8	32.4	38.4	47.4	52.5	64.4	63.4	51.3

TABLE C-17. Kunsan F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98												
FY 99											1	1
FY 00						1	1					
FY 01		2		1		1			1			
FY 02												
FY 03												1
FY 04								1				
FY 05												

TABLE C-18. Kunsan F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1140	1371	961.7	1153	1272	1251	1653	1502	1221	1073	1259	829.9
FY 97	1347	913.4	765.7	910.9	1010	1375	1510	889	1233	1282	1343	1918
FY 98	2005	907.2	881.9	992.7	1109	1070	1110	822.3	1459	1160	1172	2110
FY 99	1209	769.2	940.7	767.3	676	1097	875.2	872.6	998.2	851.2	1006	738.5
FY 00	985.9	885.2	880.1	670.1	873.5	1023	950	752	714.6	773.9	909	744.1
FY 01	853.7	782.8	657	698.8	847.3	955.8	937.3	863.7	657.4	854.3	1065	661.7
FY 02	931.8	835.8	844.5	921.5	820.2	1131	691.8	858.4	899.1	1010	743.3	627.5
FY 03	1034	702	699.8	587.1	787.1	986.6	719.1	788.9	742.1	817.5	986.1	725.1
FY 04	904.5	728.2	758.3	602.7	670.9	1072	776.8	734.6	1044	773.2	1003	531
FY 05	803.2	862	782.4	846.7	596.2	902.7	781.6	708.8	621	700.7	787	507.3

TABLE C-19. Kunsan Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	69.2	54.8	41.1	39.0	38.4	46.9	55.4	67.1	74.6	82.0	87.4	77.7
FY 97	67.4	53.3	44.6	36.0	41.7	49.9	58.8	69.2	77.6	82.0	85.5	77.2
FY 98	66.3	56.7	45.1	39.3	46.0	51.2	64.1	69.4	74.7	82.7	83.9	80.1
FY 99	70.0	55.8	46.3	41.2	41.8	51.2	59.8	67.5	76.5	82.5	84.8	79.6
FY 00	63.5	55.8	42.5	37.4	37.8	49.8	58.7	67.5	76.2	83.4	85.4	74.6
FY 01	67.1	53.5	43.5	35.7	40.4	47.6	60.8	70.1	74.7	83.0	84.8	79.5
FY 02	68.6	53.5	40.1	42.5	48.3	54.3	64.4	67.5	77.3	81.6	81.5	77.4
FY 03	66.3	50.2	43.7	35.6	45.2	51.5	62.7	74.9	78.2	81.7	84.4	81.0
FY 04	67.8	59.5	45.5	40.2	46.2	51.5	62.0	68.8	78.1	82.8	86.3	79.9
FY 05	71.0	59.5	48.7	39.3	40.4	48.4	63.8	71.1	78.3	85.6	86.5	80.0

TABLE C-20. Kunsan Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	52.7	37.2	26.8	24.7	25.0	35.0	42.2	55.2	65.5	72.0	73.3	63.4
FY 97	51.5	40.4	29.4	23.0	27.4	36.8	46.0	57.7	66.5	73.3	74.0	61.6
FY 98	49.8	42.9	31.0	26.3	32.1	37.6	51.6	56.5	64.2	72.8	74.4	67.2
FY 99	56.0	40.1	29.7	27.5	29.2	36.9	46.2	56.0	65.6	72.6	74.0	67.2
FY 00	48.1	40.1	29.2	25.2	25.2	35.2	45.5	55.2	66.3	73.5	74.4	63.3
FY 01	52.3	38.6	29.0	23.7	28.1	34.4	44.0	57.6	65.5	73.3	72.4	63.3
FY 02	53.5	37.6	28.8	29.2	27.6	37.7	50.1	56.0	65.1	72.9	73.7	64.5
FY 03	50.2	36.1	32.1	22.9	31.0	38.9	49.2	60.0	67.5	72.8	74.1	67.5
FY 04	51.9	45.9	33.0	26.9	32.5	37.9	47.1	57.5	66.5	73.6	74.8	66.3
FY 05	53.5	46.0	34.0	27.1	29.0	35.8	49.2	56.2	68.1	76.1	75.7	67.8

TABLE C-21. Luke F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96				1								1
FY 97												
FY 98				1								
FY 99	2											
FY 00						1					2	
FY 01							1	1		1		
FY 02	1				1							
FY 03			1							1		
FY 04						1					1	
FY 05				1	1			2				

TABLE C-22. Luke F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	2657	2439	2021	2621	2815	3001	2556	3118	3022	2631	2285	2469
FY 97	2627	2220	2080	2371	1939	2566	2343	2226	2320	2327	2123	1853
FY 98	2578	2009	1943	2286	2045	2662	2266	2096	2587	2204	2260	6265
FY 99	2225	2214	2081	2058	1875	2157	1441	1814	2314	1968	2131	1926
FY 00	2120	1877	1953	2150	1879	2109	1883	2384	2094	2154	2837	1776
FY 01	2262	2313	1947	2524	2157	2408	2124	2172	2240	2259	2772	1881
FY 02	2562	2020	1756	2391	2269	2207	2394	2375	2185	2151	2593	1955
FY 03	2207	2001	1760	2335	2102	2132	2645	2363	2179	2204	2435	2120
FY 04	2571	2007	2210	2164	2163	2686	2309	2201	2400	2401	2429	2266
FY 05	2090	2078	2148	2102	2150	2512	2476	2477	2458	2221	2914	2050

TABLE C-23. Luke Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	90.5	79.4	68.2	68.2	73.0	76.8	87.1	97.1	106.0	106.3	104.5	94.3
FY 97	86.7	76.4	68.4	66.3	71.1	83.7	83.1	100.0	101.3	107.3	106.0	101.6
FY 98	88.6	76.3	63.1	67.0	64.3	73.8	79.2	90.1	100.7	108.8	107.9	100.6
FY 99	87.3	75.4	67.7	70.1	73.7	78.9	80.0	93.7	102.4	103.6	105.7	100.3
FY 00	93.1	84.3	67.7	71.4	72.8	74.1	90.2	98.6	105.2	108.7	105.1	102.9
FY 01	82.3	67.0	68.1	64.0	66.2	77.1	83.9	101.7	106.3	106.6	106.1	103.8
FY 02	91.5	77.9	63.1	67.3	75.6	79.2	89.9	95.5	107.5	108.8	107.6	99.1
FY 03	85.4	78.1	64.8	74.1	66.2	73.4	80.4	92.2	101.3	106.3	102.0	98.6
FY 04	87.7	71.9	68.7	68.6	67.2	84.3	86.1	97.0	105.2	107.3	104.9	100.6
FY 05	86.4	69.6	65.9	64.6	66.8	74.4	86.0	96.4	104.8	111.1	104.0	101.8

TABLE C-24. Luke Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	56.8	51.6	41.6	39.6	48.4	49.0	55.5	66.0	72.6	82.3	80.6	71.1
FY 97	58.1	48.5	41.5	44.6	43.9	52.0	56.8	69.7	70.2	77.4	81.2	76.4
FY 98	58.4	49.0	41.8	43.6	44.7	48.8	50.6	60.3	67.5	80.8	81.6	73.8
FY 99	57.9	46.6	41.9	41.0	44.9	48.4	52.7	62.6	74.3	79.9	80.6	73.4
FY 00	60.0	50.3	40.2	42.9	46.6	49.3	57.9	66.8	76.2	82.5	81.8	74.4
FY 01	60.5	43.5	42.4	42.2	43.9	50.8	56.6	69.4	78.0	81.5	80.7	74.4
FY 02	62.3	53.7	39.4	41.8	42.4	46.9	59.2	64.4	74.4	84.4	79.4	73.2
FY 03	58.5	50.8	42.5	47.1	47.2	49.2	51.8	63.9	72.3	82.3	79.8	73.6
FY 04	58.9	50.3	42.0	45.0	44.4	57.9	59.8	68.7	74.1	82.8	80.9	73.7
FY 05	62.2	50.7	45.1	47.4	50.5	50.9	56.4	66.7	75.0	84.2	81.2	76.4

TABLE C-25. Misawa F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98							1			1		
FY 99	1			1								
FY 00												
FY 01		1										
FY 02												
FY 03												
FY 04												
FY 05				1								1

TABLE C-26. Misawa F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1083	1069	874.1	586.7	928.2	980	1222	1078	946	1488	1402	1284
FY 97	1147	1231	687.7	718.7	837.2	874	1185	944.4	935.3	1383	779.6	661
FY 98	1139	813.6	762	636.1	732	871.1	969.6	1454	1224	743.6	1125	2936
FY 99	974	833.5	1009	391	916	1362	1270	1284	1258	1307	1172	882.1
FY 00	900.8	884.9	836	684.7	852.7	1326	975.1	905.6	860	994.3	1194	801.1
FY 01	863.1	844.3	700.9	870.4	880	930.2	1026	897.4	1055	900.7	1450	845.9
FY 02	985.5	941.8	793.8	966.6	694	769.3	1075	1060	933.3	507.7	938.9	1103
FY 03	1277	1115	1021	1250	1129	1866	1660	659.8	1031	792.6	854.6	1061
FY 04	1035	834.3	887.6	778.1	744.7	1011	833.4	754.2	517.8	488.9	442.7	247.1
FY 05	521.6	600.9	471.4	583.1	587.1	1142	953.3	773.3	661.9	577.4	532.8	535.1

TABLE C-27. Misawa Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	65.4	52.2	39.8	33.9	35.2	41.1	52.3	60.5	65.2	75.3	74.3	72.2
FY 97	64.2	49.4	41.2	36.5	37.4	44.8	54.9	60.1	66.6	78.9	77.6	70.6
FY 98	62.2	55.3	42.2	30.8	35.4	47.6	59.8	66.8	64.9	71.9	74.5	74.6
FY 99	65.7	48.5	39.3	34.4	35.2	42.7	54.3	65.9	70.9	74.7	82.6	75.1
FY 00	62.5	53.6	40.5	37.8	36.0	41.2	53.7	62.0	70.0	78.1	78.1	73.9
FY 01	63.1	49.3	37.6	31.4	31.0	40.8	57.0	60.9	67.5	74.7	71.5	70.3
FY 02	62.7	52.2	33.6	35.8	38.6	46.7	58.8	62.0	66.1	73.7	74.6	71.4
FY 03	61.9	45.9	36.3	32.9	34.1	39.8	56.8	62.9	65.1	63.6	72.7	70.9
FY 04	62.8	52.7	41.3	35.6	39.5	45.1	55.9	65.2	72.2	77.7	80.0	72.2
FY 05	62.6	55.2	42.1	33.9	32.0	39.4	55.5	58.4	68.4	70.6	81.4	73.6

TABLE C-28. Misawa Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	50.6	38.7	30.3	23.9	25.0	30.4	36.9	45.4	53.8	64.1	64.3	59.1
FY 97	48.7	38.3	28.7	26.6	28.0	30.0	39.6	48.6	55.8	65.6	66.2	59.2
FY 98	46.3	40.5	31.0	21.6	25.4	33.2	44.2	49.9	54.3	61.6	65.5	63.4
FY 99	51.4	35.8	28.7	24.9	25.3	28.7	39.5	48.0	58.3	65.8	71.5	62.2
FY 00	49.3	39.1	29.2	26.7	24.5	29.2	39.1	50.1	56.7	66.1	68.5	62.1
FY 01	47.5	36.3	27.2	20.4	20.9	29.4	40.3	48.4	55.6	63.5	62.8	58.5
FY 02	48.8	38.6	24.9	25.6	26.3	33.4	42.9	47.2	53.6	64.6	64.5	58.6
FY 03	48.1	32.6	25.9	23.0	24.1	29.1	40.0	46.5	54.6	57.4	63.7	57.4
FY 04	45.8	38.3	31.5	25.0	27.9	30.3	39.5	50.4	57.3	65.2	65.9	60.3
FY 05	49.4	42.5	31.5	25.2	23.1	29.3	40.4	46.4	56.3	61.6	69.5	60.5

TABLE C-29. Moody F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96					1	1						
FY 97												
FY 98		1										
FY 99												
FY 00												
FY 01												
FY 02												
FY 03												
FY 04												
FY 05												

TABLE C-30. Moody F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	986	1451	911.7	926	973.5	838.1	990.3	1159	995.5	559	602.2	1455
FY 97	1434	1090	786.5	1205	1282	1002	796.9	758.5	773	758.9	672.6	504.2
FY 98	698.2	717.7	995.9	781.8	945.2	1065	938.9	847	632.7	802.4	819.4	2024
FY 99	740.8	596.8	634	693.6	801.8	1036	652.4	813.3	803.7	460.3	820	780.8
FY 00	663.4	719.8	657.8	791.7	747.5	915.7	830.5	677.5	821.7	760.4	919.5	660.9
FY 01	647.3	506.6	405.8	338.4	211.6	82.6	30	0	0	0	0	0
FY 02	0	0	0	0	0	0	0	0	0	0	0	0
FY 03	0	0	0	0	0	0	0	0	0	0	0	0
FY 04	0	0	0	0	0	0	0	0	0	0	0	0
FY 05	0	0	0	0	0	0	0	0	0	0	0	0

TABLE C-31. Moody Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	83.5	70.5	64.6	67.5	69.0	67.8	78.0	88.1	90.4	91.4	88.0	84.3
FY 97	75.5	67.7	64.3	61.6	65.4	77.0	76.7	81.7	84.9	92.0	89.8	89.9
FY 98	78.4	68.1	62.5	65.4	65.6	69.3	76.9	87.9	95.9	92.5	90.9	85.7
FY 99	80.1	73.6	67.4	67.0	67.7	71.1	82.5	85.7	88.9	91.3	93.7	87.9
FY 00	80.1	73.2	65.2	63.0	70.9	76.5	77.8	88.6	92.3	92.8	92.1	84.5
FY 01	79.8	69.8	60.3	61.5	70.4	69.3	79.8	85.0	86.8	88.6	88.8	81.9
FY 02	78.2	75.5	70.1	63.3	65.9	75.5	83.1	86.5	88.8	91.2	89.6	88.3
FY 03	81.2	67.4	61.5	59.3	65.5	73.6	77.9	85.1	87.9	89.4	88.1	84.3
FY 04	78.5	72.3	61.4	61.8	61.3	75.2	78.4	86.4	90.1	91.0	88.8	85.2
FY 05	81.1	73.6	64.7	65.2	66.6	69.0	75.6	82.1	87.1	91.0	90.0	90.5

TABLE C-32. Moody Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	64.7	49.2	42.5	41.1	43.5	47.0	54.3	63.5	69.1	73.6	69.9	65.8
FY 97	56.4	47.4	43.7	43.0	47.7	56.5	55.4	62.5	68.7	73.5	71.0	69.7
FY 98	59.7	50.0	45.6	47.2	47.0	48.3	57.3	67.4	73.2	74.7	71.7	71.1
FY 99	59.7	55.0	48.1	44.2	46.1	45.8	61.2	63.1	69.6	73.6	74.4	67.7
FY 00	60.0	51.2	43.0	42.7	45.2	53.4	53.8	65.7	69.7	72.1	72.6	68.9
FY 01	55.7	49.5	39.7	41.5	52.0	51.7	58.6	64.6	71.5	73.9	73.3	68.1
FY 02	57.8	54.9	50.6	44.8	44.6	52.6	64.1	66.5	71.7	74.3	74.1	73.3
FY 03	66.4	51.9	46.8	40.9	48.4	57.8	59.1	71.0	72.9	74.6	74.2	68.8
FY 04	61.8	56.5	43.9	43.7	45.8	55.0	58.0	68.9	73.1	74.7	75.5	71.8
FY 05	66.3	56.0	46.3	47.7	50.8	50.0	55.7	65.0	71.8	77.2	75.1	71.0

TABLE C-33. Mountain Home F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1											
FY 97												
FY 98												
FY 99	1											
FY 00											1	
FY 01												
FY 02												
FY 03												
FY 04												
FY 05												

TABLE C-34. Mountain Home F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	493.7	564.7	347.2	450.4	493	501.9	690.5	757	632.1	697.9	618	635.3
FY 97	478.8	400.7	370.5	495.4	341.7	809.3	1077	1143	779.7	401	363.6	577.1
FY 98	1012	327.9	478.7	450.3	402.8	509.2	802	660.3	516.8	488.1	521.9	1095
FY 99	487.1	353.5	383.2	516.2	666.7	755.2	489.2	420.7	539	456.9	490.9	359.3
FY 00	549.4	677.8	390.1	569.4	384.5	516.6	460	456.9	551.3	458.2	517	384
FY 01	421	431	396.6	507.2	421.6	570.5	521.6	583.4	412.7	526.5	498.8	331.2
FY 02	430.1	863.3	936.1	670.3	397.4	480.9	548.3	446.6	881.1	769.9	876.6	405.5
FY 03	361.7	363.4	343.3	317.5	303.5	273.8	268.3	293	333	335	300.3	367.2
FY 04	377.6	298.3	343.5	274.3	462.8	584.9	385.6	448.1	439.8	372.6	398	361.6
FY 05	258.9	215.2	231.7	306.7	469.3	592.4	489.7	331.7	368.8	350.1	549	260.9

TABLE C-35. Mountain Home Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	64.2	53.4	39.7	38.9	43.5	55.4	61.5	68.0	83.7	94.7	92.3	77.5
FY 97	64.9	50.5	40.0	40.0	46.1	59.0	61.5	77.9	83.1	90.5	93.7	83.5
FY 98	66.1	52.8	39.0	45.5	47.2	54.9	60.5	67.7	77.8	96.9	95.3	84.1
FY 99	65.7	51.9	38.8	42.3	44.3	54.6	59.8	70.0	82.4	93.3	93.1	80.9
FY 00	71.1	58.2	36.9	40.4	50.6	54.7	69.8	75.0	87.0	94.9	95.0	79.3
FY 01	64.8	40.5	35.5	36.4	43.6	58.9	61.9	80.4	85.6	92.4	96.1	85.1
FY 02	67.7	54.5	35.1	36.2	44.5	54.6	64.0	72.2	81.2	95.7	86.8	81.4
FY 03	63.8	51.8	42.2	44.2	46.6	56.6	61.2	71.8	85.9	101.3	94.2	80.8
FY 04	73.8	45.6	42.3	32.4	38.5	60.1	66.1	71.2	84.0	97.1	90.8	79.1
FY 05	65.5	46.0	42.2	39.6	47.2	57.5	63.0	69.2	80.4	99.9	94.8	82.8

TABLE C-36. Mountain Home Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	34.3	32.7	25.8	23.8	23.7	31.7	36.2	42.1	49.8	61.8	57.7	46.2
FY 97	37.1	29.4	27.0	25.6	25.5	30.6	34.7	46.0	51.7	56.2	57.3	52.4
FY 98	37.2	30.9	20.7	29.4	30.1	32.5	35.7	43.9	47.8	61.0	58.4	54.0
FY 99	36.1	32.7	21.8	26.5	28.0	30.7	33.7	41.3	51.7	55.4	57.5	45.6
FY 00	36.7	35.6	24.1	25.9	32.5	30.4	39.7	47.8	53.3	58.7	57.9	47.2
FY 01	39.2	22.5	24.0	21.3	25.6	33.3	34.9	46.6	53.5	60.0	63.3	53.4
FY 02	40.3	33.6	24.5	24.6	23.9	31.8	38.1	46.6	50.4	65.3	57.3	48.2
FY 03	33.7	29.9	28.3	31.7	25.8	36.4	40.0	45.7	56.6	65.8	61.8	49.1
FY 04	44.7	27.6	30.3	23.5	27.3	33.1	38.4	45.5	54.2	63.1	59.5	46.5
FY 05	40.0	30.1	28.7	25.7	25.6	34.1	39.3	48.2	50.5	64.1	59.3	48.1

TABLE C-37. Nellis F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97											2	
FY 98						1						2
FY 99		1										
FY 00											1	
FY 01											1	
FY 02						1						
FY 03							1					
FY 04				1								
FY 05												

TABLE C-38. Nellis F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	891.1	836.4	694.3	840.6	1016	1042	1202	889.7	787.5	1044	1001	806.6
FY 97	1021	847.9	661.9	686.6	808.3	964.7	942.5	912.9	807.5	872.7	848.7	799.6
FY 98	934.6	679.6	773.5	694.6	651	957.6	1042	812.2	791.4	845.2	986.7	2556
FY 99	1009	674.4	726.3	770.4	816.4	903.4	874.2	876.2	819.3	789.9	982.7	877.7
FY 00	895.3	766.5	792	737.5	918.5	1136	1019	947.6	902.8	714.7	958.7	914.7
FY 01	1023	817.1	644.4	792.8	891.1	956.7	1069	906.8	755.3	816.2	1062	718.6
FY 02	991.7	755.4	647.8	832	865.7	764.6	823.5	922.8	829.3	858.7	857.1	880.2
FY 03	819.8	639.2	478.8	827.8	812.4	854.4	842.1	908.6	845.5	755.6	917.4	761.1
FY 04	692.9	517.4	609.4	753.3	795.1	1047	792.8	1052	862.4	811.6	920.9	760.7
FY 05	892.9	798.7	542.4	709.9	756.5	960.1	956.6	798	872.4	893.3	1110	911.2

TABLE C-39. Nellis Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	86.0	75.0	62.2	63.3	68.8	75.4	84.9	93.9	104.8	109.3	108.2	96.1
FY 97	83.2	69.7	58.8	59.5	65.2	78.9	80.1	96.6	98.7	104.3	105.1	95.5
FY 98	82.9	69.3	58.4	61.0	59.8	70.9	75.0	85.2	95.1	106.8	105.3	93.4
FY 99	80.9	67.5	60.7	63.4	66.6	75.3	74.8	89.3	99.8	102.7	103.4	96.8
FY 00	88.3	73.7	61.8	62.9	66.1	72.1	86.5	96.7	103.8	106.7	103.5	97.2
FY 01	81.1	62.5	62.2	56.9	61.8	73.2	78.5	97.7	104.8	106.2	105.3	98.4
FY 02	85.0	69.9	55.9	57.6	66.7	70.3	83.7	89.7	102.4	107.5	104.1	96.6
FY 03	80.9	69.3	58.3	67.1	62.8	72.1	75.9	90.8	101.4	107.4	102.5	98.5
FY 04	89.4	62.9	58.0	58.6	58.4	79.4	81.0	91.7	101.0	105.0	101.6	94.3
FY 05	78.2	63.8	58.3	59.0	61.9	69.9	78.3	91.1	97.8	107.5	100.7	94.3

TABLE C-40. Nellis Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	54.3	45.4	37.7	36.0	43.5	47.6	56.3	65.0	72.6	82.0	79.9	69.7
FY 97	54.6	46.5	38.6	39.8	41.0	47.1	54.1	68.1	74.3	75.9	78.6	72.6
FY 98	53.7	45.0	36.0	38.3	42.8	46.5	50.8	58.9	69.0	77.6	80.3	68.3
FY 99	54.2	43.0	36.7	36.8	40.0	48.6	51.3	63.4	70.7	78.0	76.9	70.1
FY 00	54.8	43.9	37.2	40.0	44.5	48.1	58.7	67.9	76.6	79.1	80.5	68.0
FY 01	58.2	39.5	38.6	37.0	41.6	50.0	54.6	69.4	76.3	79.1	80.0	71.2
FY 02	60.0	48.0	36.4	35.3	38.2	43.5	58.4	62.6	73.9	82.5	76.3	70.5
FY 03	55.9	45.9	39.0	42.4	42.9	49.2	53.6	65.3	75.5	83.4	78.8	70.4
FY 04	60.7	43.0	37.3	35.1	39.4	52.7	56.5	66.4	73.3	79.0	77.0	67.2
FY 05	56.6	44.4	38.5	42.6	44.7	47.8	52.6	66.7	71.6	80.0	77.5	66.6

TABLE C-41. Osan F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98												
FY 99											1	
FY 00												
FY 01	1											
FY 02								1				
FY 03												
FY 04												
FY 05												

TABLE C-42. Osan F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	482.9	481.3	516.7	660.4	647.9	861	439.8	632.9	481.2	565.1	479.3	271.9
FY 97	527	543.6	441.4	547.8	437.4	499.5	759.7	464.7	534.2	576	607.7	395.6
FY 98	709.6	456.2	561.4	536.8	577.3	475.3	609.9	473.8	597.2	567.2	597.5	1457
FY 99	631.1	560.3	599	670	587.5	901.4	605.3	370.4	573.7	546.8	632.1	378.5
FY 00	522.5	581.6	705.3	577.2	582.5	647.3	713.4	715.5	597.2	437.8	682.1	503.1
FY 01	742.8	571.4	639.2	577.8	671.5	644.7	789.4	756.5	679.2	654.7	725.3	362.9
FY 02	776.1	676.5	552.4	643.2	588.4	728.7	603.1	710.2	633.3	647.1	440.9	444.8
FY 03	840.9	490.2	595.8	656.4	579.9	808.8	730	525	678	672.9	446.9	394.3
FY 04	695.2	384.2	652.7	543.2	617.9	955.8	729.7	541.4	629.2	575.5	643.8	586
FY 05	647.2	730.2	624.7	511.7	616.2	865.2	664.5	542.2	443.5	524	538.6	465.2

TABLE C-43. Osan Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	68.4	56.4	41.3	39.8	42.3	51.9	64.2	78.7	82.8	88.4	89.9	84.0
FY 97	71.0	54.2	47.5	37.2	45.4	57.0	67.8	75.3	85.5	89.4	90.9	81.1
FY 98	70.4	59.5	46.1	39.7	49.9	59.2	72.3	77.5	80.4	86.3	84.0	79.8
FY 99	70.4	53.8	44.3	41.1	42.4	52.8	66.8	71.5	80.5	84.2	84.7	80.1
FY 00	65.4	54.1	41.1	35.0	38.1	53.5	63.5	72.9	82.5	86.7	86.0	75.6
FY 01	66.2	48.6	39.7	33.7	42.9	51.7	66.9	77.9	81.5	87.2	88.0	81.2
FY 02	70.7	52.9	37.7	39.5	43.8	55.3	64.7	72.4	79.6	84.1	81.1	79.1
FY 03	63.5	44.9	41.9	33.0	43.3	50.2	62.1	73.1	75.9	78.5	79.6	74.5
FY 04	62.3	54.3	38.2	31.1	42.5	52.4	65.1	71.0	81.1	83.7	86.1	76.9
FY 05	65.1	50.4	38.4	31.4	32.6	45.0	61.7	70.6	77.6	83.0	82.7	77.9

TABLE C-44. Osan Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	48.4	31.4	19.7	19.0	19.5	32.2	41.2	55.1	68.6	72.9	74.2	61.6
FY 97	47.0	33.4	24.2	14.2	19.7	32.2	43.0	57.2	65.1	73.6	73.6	58.0
FY 98	42.9	37.5	26.7	19.9	26.7	35.3	52.8	56.8	65.1	72.9	72.0	62.5
FY 99	49.8	32.1	21.0	18.0	20.4	30.8	42.4	52.0	62.9	69.3	70.4	65.3
FY 00	47.2	34.5	20.9	18.9	17.0	29.4	40.1	54.1	64.7	73.3	72.5	60.5
FY 01	47.6	32.6	23.1	14.7	23.8	30.4	42.4	55.7	65.5	73.1	71.3	60.5
FY 02	49.9	29.5	18.8	22.1	22.4	30.9	44.4	52.6	60.4	70.4	70.2	61.0
FY 03	44.1	27.5	24.1	14.6	25.8	32.9	43.7	55.3	62.9	68.2	69.8	62.2
FY 04	44.1	39.3	22.9	16.9	24.6	31.0	42.3	54.4	63.1	72.3	73.2	62.5
FY 05	43.0	35.5	22.0	13.5	17.2	26.7	42.0	48.8	63.6	70.3	70.6	63.7

TABLE C-45. Shaw F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96						2						
FY 97												
FY 98									1			1
FY 99			1									
FY 00	1		1							1		
FY 01			1									
FY 02												
FY 03							1					
FY 04												
FY 05		1	1			1				1		

TABLE C-46. Shaw F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1522	1907	1744	1865	1944	1914	1814	991.4	2161	2360	1822	1795
FY 97	2373	2229	2112	2377	2438	2557	2455	2241	2186	2200	2434	1840
FY 98	2619	2679	2378	2506	2559	2465	2931	2269	2416	2351	1910	5690
FY 99	2620	2105	1629	2477	1911	2225	2705	4493	2726	1233	2133	1758
FY 00	2091	2096	1571	1719	2232	2202	1859	2179	2373	1974	2544	1775
FY 01	2048	1997	1471	2372	1722	2058	2259	2486	1969	2015	2375	1611
FY 02	2360	2173	1482	1395	1588	1793	2132	2245	1853	2370	1974	1614
FY 03	1734	1685	1503	2088	2090	3619	2876	1661	1927	2084	1774	1488
FY 04	2499	2013	1658	1633	1956	2035	1703	1735	1432	1426	1426	1470
FY 05	1986	1970	1936	1735	1786	1812	1450	1275	693.8	1060	1267	812.4

TABLE C-47. Shaw Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	77.2	62.2	55.2	55.4	61.1	63.2	75.1	85.6	88.3	91.5	86.8	83.8
FY 97	75.0	62.5	60.6	56.9	62.7	74.4	72.4	79.6	82.2	88.7	87.9	83.5
FY 98	73.6	61.5	54.7	58.2	59.8	63.1	72.7	84.4	92.2	93.1	90.1	85.6
FY 99	78.9	69.0	61.9	63.2	62.3	64.9	76.7	81.1	83.3	88.4	94.4	83.1
FY 00	73.6	70.0	59.5	51.5	64.2	71.8	73.8	87.2	90.2	90.5	90.0	81.6
FY 01	78.4	64.3	48.2	55.3	63.1	63.2	75.5	83.6	85.4	86.6	90.8	81.8
FY 02	75.4	72.4	63.5	58.5	61.1	71.3	80.1	81.1	88.6	94.2	90.8	84.4
FY 03	74.2	62.8	54.4	53.2	59.1	67.9	72.0	79.7	86.2	87.9	89.1	84.3
FY 04	75.5	72.5	56.1	56.2	55.5	71.4	77.4	86.7	87.4	89.4	85.2	81.1
FY 05	74.7	66.7	58.8	59.2	59.2	65.3	74.4	79.4	85.2	91.1	89.6	88.9

TABLE C-48. Shaw Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	58.0	40.9	33.2	34.1	38.7	40.7	50.4	62.0	67.5	72.1	69.7	65.5
FY 97	52.6	40.0	38.5	37.2	40.9	49.7	49.3	56.7	65.4	71.1	67.9	64.9
FY 98	54.6	41.8	37.9	40.1	40.8	42.5	52.6	63.2	71.1	73.3	70.3	65.7
FY 99	54.3	48.0	43.1	40.0	39.3	39.8	55.0	58.7	63.3	70.6	72.8	63.4
FY 00	53.8	47.3	38.0	35.7	37.3	47.5	50.8	62.9	68.2	70.4	70.0	64.4
FY 01	51.2	43.3	31.1	34.3	41.1	45.1	54.3	61.7	69.7	72.8	70.9	61.2
FY 02	49.5	47.4	41.6	36.5	37.6	45.4	57.1	58.6	68.1	72.7	69.9	68.7
FY 03	59.6	43.5	35.2	33.5	38.4	47.5	51.4	62.5	67.9	71.5	71.8	63.9
FY 04	54.8	48.0	33.4	33.5	35.8	45.6	51.1	63.6	70.4	71.2	68.3	65.7
FY 05	57.6	46.4	35.8	37.6	38.6	42.2	50.0	57.9	68.5	73.5	72.8	68.0

TABLE C-49. Spangdahlem F-16C Pilot Human Factors Mishaps

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96												
FY 97												
FY 98												
FY 99											1	
FY 00					1							
FY 01		1			1							
FY 02		1				1						
FY 03												
FY 04				1		1						
FY 05		1									1	

TABLE C-50. Spangdahlem F-16C Flying Hours

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	1191	1044	1003	753.7	1087	1172	1153	1062	1345	1286	1021	737.1
FY 97	1231	952.9	601.2	966.8	1327	1180	1010	1065	778.2	1031	1028	924.1
FY 98	1079	1276	1170	1502	1424	1533	913.2	936.3	950.1	845.8	957.3	1708
FY 99	800.8	946.7	627.4	1067	1050	1442	2663	2820	930.2	576.8	846.5	732.8
FY 00	935.4	764.5	545.6	655	747.2	982.8	1098	1162	1168	1007	1338	1094
FY 01	1113	1309	950.6	1033	1090	1157	923.9	1053	1026	877	1360	957.8
FY 02	1103	775.1	797.1	937	1061	892.2	1005	1078	1272	957.7	1128	881.6
FY 03	1253	920.1	712.5	662.8	1192	3434	2280	460.1	611.3	596.1	582.3	486
FY 04	689	515.8	548.9	555.5	755.7	1128	1008	1060	1162	942.8	1045	602.2
FY 05	1059	516	610.1	942.6	821.9	1150	1214	720.7	733.9	557.6	1193	911

TABLE C-51. Spangdahlem Average Monthly High Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	60.9	44.8	34.9	34.3	35.8	44.4	57.2	58.5	69.1	69.5	71.8	60.7
FY 97	55.9	42.6	33.9	32.2	44.5	52.9	54.5	63.4	66.6	72.1	78.3	68.7
FY 98	54.7	45.2	40.0	40.5	46.3	49.0	52.9	66.0	69.5	67.8	72.5	62.2
FY 99	52.3	39.4	39.2	42.2	38.7	49.7	56.5	66.3	68.1	74.8	72.1	71.0
FY 00	54.9	42.1	38.9	38.8	44.2	47.9	58.0	66.6	72.1	66.4	74.0	65.5
FY 01	54.3	47.2	43.3	39.2	43.8	46.3	52.1	66.7	66.1	72.9	73.3	56.8
FY 02	61.5	45.0	37.1	37.4	46.0	50.8	57.6	65.4	72.2	71.7	72.6	63.5
FY 03	54.8	48.1	40.5	34.9	39.7	51.2	57.6	58.7	77.1	74.9	85.4	67.1
FY 04	49.3	48.8	38.3	37.1	40.5	47.2	57.8	62.8	68.5	70.0	72.9	64.3
FY 05	56.6	44.0	35.3	40.2	34.6	48.4	56.9	62.4	74.6	72.4	68.2	69.0

TABLE C-52. Spangdahlem Average Monthly Low Temperatures (deg F)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY 96	46.9	34.3	28.2	27.2	26.3	30.2	37.6	43.3	50.0	50.7	53.4	45.6
FY 97	41.2	36.8	27.1	23.3	35.0	37.7	35.8	45.2	51.0	53.7	57.5	48.0
FY 98	40.3	36.1	33.2	31.9	31.2	35.6	40.1	48.4	51.7	52.5	51.9	51.7
FY 99	42.6	31.1	31.9	33.8	29.4	35.7	41.0	47.2	49.2	58.8	54.4	54.1
FY 00	41.4	33.0	31.7	30.9	33.4	36.2	40.1	49.1	50.2	51.6	54.2	52.1
FY 01	44.8	40.6	37.1	32.1	34.8	37.2	39.6	51.9	50.7	58.4	56.7	47.5
FY 02	49.9	35.7	30.3	30.0	38.1	36.2	40.3	48.9	57.0	58.6	57.8	49.3
FY 03	43.7	41.9	35.0	27.5	29.3	43.6	48.0	51.7	62.9	63.2	71.5	54.6
FY 04	40.8	41.5	32.1	32.0	33.1	35.3	44.0	48.6	53.7	56.4	60.2	54.0
FY 05	46.9	38.5	28.9	33.5	27.9	36.1	44.9	47.4	55.7	60.1	54.4	53.5

APPENDIX D

DATA SORTED BY HIGH TEMPERATURE (DEG F)

TABLE D-1. Flight Mishaps Sorted by Average Monthly High Temperature (deg F)

	Below 0	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Above 100
F-15C Mt Home					2	4	2	3				
F-15C Elmendorf			1	3	2		1	1	1			
F-15C Eglin								5	1	7		
F-15C Langley							1	4	1	2		
F-15C Tyndall								4	3	13	1	
F-15C Kadena								4	4	7	1	
F-15C Nellis								2	3		1	4
F-15C Lakenheath						4	2					
F-15C Spangdahlem								1				
	0	0	1	3	4	8	6	24	13	29	3	4
F-15E Seymour							5	3	4	4	1	
F-15E Elmendorf			1			1		1	1			
F-15E Mt Home							1	2				
F-15E Lakenheath						5	2	3				
F-15E Nellis								0				
	0	0	1	0	0	6	8	9	5	4	1	0
F-16C Eielson	1					1		1	2			
F-16C Mt Home								2			1	
F-16C Cannon							1	1	1	1	2	
F-16C Luke								5	3	3	4	6
F-16C Aviano								1				
F-16C Hill					5	5	3	1	1	2	1	
F-16C Kunsan					1	2	3	1	2	2		
F-16C Misawa					2	1	1	1	2			
F-16C Moody								3				
F-16C Nellis							1	1	3		2	4
F-16C Osan								1	1	1		
F-16C Shaw						1	2	5	2	1	3	
F-16C Spangdahlem					1	6	1	1	1			
	1	0	0	0	9	16	12	24	18	10	13	10
	Below 0	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Above 100
TOTAL FIGHTERS	1	0	2	3	13	30	26	57	36	43	17	14

TABLE D-2. Number of Months Experienced per Average Monthly High Temperature (deg F)

	Below 0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**Above 100**
F-15C Mt Home					12	20	18	21	12	18	18	1
F-15C Elmendorf			9	17	25	17	17	28	7			
F-15C Eglin							3	36	22	44	15	
F-15C Langley						14	27	26	22	31		
F-15C Tyndall								38	27	49	6	
F-15C Kadena								23	42	47	8	
F-15C Nellis					20	28	21	17	27	7		
F-15C Lakenheath					5	45	29	36	5			
F-15C Spangdahlem												
F-15E Seymour						3	19	24	27	36	11	
F-15E Elmendorf												
F-15E Mt Home												
F-15E Lakenheath												
F-15E Nellis												
F-16C Eielson	11	11	15	12	11	12	10	20	18			
F-16C Mt Home												
F-16C Cannon						10	20	23	22	27	18	
F-16C Luke								24	24	18	15	39
F-16C Aviano						26	22	24	26	21	1	
F-16C Hill				1	22	18	16	17	20	20	6	
F-16C Kunsan					9	26	19	21	22	23		
F-16C Misawa					27	17	17	26	30	3		
F-16C Moody								22	16	23	11	
F-16C Nellis												
F-16C Osan					15	18	17	15	26	28	1	
F-16C Shaw						1	19	23	29	36	12	
F-16C Spangdahlem					19	29	23	28	20	1		
	Below 0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**Above 100**
TOTAL	11	11	24	30	165	284	297	492	444	432	122	40

TABLE D-3. Number of Flying Hours Sorted by Average Monthly High Temperature (deg F)

	Below 0	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Above 100
F-15C Mt Home					10267	19500	18230	21430	12020	17973	17628	1240
F-15C Elmendorf			8545	14752	24978	19102	15055	28663	7191			
F-15C Eglin							3905	40843	31295	49590	11168	
F-15C Langley						18205	39041	40522	34177	53466		
F-15C Tyndall								39047	29590	54931	6739	
F-15C Kadena								28035	49838	51795	10947	
F-15C Nellis							2881	6503	5300	4981	6823	6664
F-15C Lakenheath					2012	23304	20251	19757	2674			
F-15C Spangdahlem					1968	3816	3764	5578	1762			
F-15E Seymour						2922	25042	39382	36982	48053	15352	
F-15E Elmendorf			3769	7158	13298	10211	8546	15908	3743			
F-15E Mt Home					8226	10288	9957	12306	6029	9424	8673	697
F-15E Lakenheath					5362	57235	41831	48655	6383			
F-15E Nellis							2502	5090	3873	3756	4767	5510
F-16C Eielson	10853	8880	13911	12249	12088	11976	10312	19151	18869			
F-16C Mt Home					5604	8079	8946	12009	6033	9794	8779	335
F-16C Cannon						8119	31442	30435	27771	34967	26805	
F-16C Luke								51364	53682	41976	34595	93508
F-16C Aviano						27058	23418	30414	34371	22238	808	
F-16C Hill				1338	28509	24851	25235	26871	31177	30086	8906	
F-16C Kunsan					8005	22486	19101	20649	20012	22911		
F-16C Misawa					23172	15793	17087	26542	29125	2147		
F-16C Moody								17429	13046	15574	8350	
F-16C Nellis							8935	20303	15906	15668	19692	23030
F-16C Osan					8922	10725	10936	9966	15713	15334	608	
F-16C Shaw						1471	36871	48200	61948	71009	25841	
F-16C Spangdahlem					15396	30078	28724	30055	18780	582		
	Below 0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**Above 100**
TOTAL	10853	8880	26225	35497	167807	325219	412012	695107	577290	576255	216481	130984

APPENDIX E

DATA SORTED BY LOW TEMPERATURE (DEG F)

TABLE E-1. Flight Mishaps Sorted by Average Monthly Low Temperature (deg F)

	Below 0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**Above 100**
F-15C Mt Home				3	7	1						
F-15C Elmendorf	1	2	3			1	2					
F-15C Eglin						4	2	4	3			
F-15C Langley						4	1	2	1			
F-15C Tyndall						4	1	7	9			
F-15C Kadena							4	4	7	1		
F-15C Nellis						4	1		3	2		
F-15C Lakenheath					2	3	1					
F-15C Spangdahlem							1					
	1	2	3	3	9	21	13	17	23	3	0	0
F-15E Seymour					5	3	4	4	1			
F-15E Elmendorf	1			1		1	1					
F-15E Mt Home				1	1	1						
F-15E Lakenheath					3	3	4					
F-15E Nellis						0						
	1	0	0	2	9	8	9	4	1	0	0	0
F-16C Eielson	1			1	1		2					
F-16C Mt Home					2		1					
F-16C Cannon					2		2	2				
F-16C Luke					1	5	5	4	1	5		
F-16C Aviano						1						
F-16C Hill				8	5	1	1	3				
F-16C Kunsan				1	4	1	1	3	1			
F-16C Misawa				2	1	1	1	2				
F-16C Moody						2	1					
F-16C Nellis					1	3	1	2	2	2		
F-16C Osan						1	1		1			
F-16C Shaw					3	5	2	1	3			
F-16C Spangdahlem					7	1	2					
	1	0	0	12	27	21	20	17	8	7	0	0
	Below 0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**Above 100**
TOTAL FIGHTERS	3	2	3	17	45	50	42	38	32	10	0	0

TABLE E-2. Number of Months Experienced per Average Monthly Low Temperature (deg F)

	Below 0	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Above 100
F-15C Mt Home				30	36	23	22	9				
F-15C Elmendorf	5	13	23	20	15	22	22					
F-15C Eglin					2	25	32	25	36			
F-15C Langley				3	29	24	22	27	15			
F-15C Tyndall						26	30	23	41			
F-15C Kadena							26	55	37	2		
F-15C Nellis					20	28	21	17	27	7		
F-15C Lakenheath					18	49	36	17				
F-15C Spangdahlem												
F-15E Seymour				1	23	25	24	31	16			
F-15E Elmendorf												
F-15E Mt Home												
F-15E Lakenheath												
F-15E Nellis												
F-16C Eielson	33	16	9	13	14	17	18					
F-16C Mt Home												
F-16C Cannon				16	33	18	23	30				
F-16C Luke					2	37	27	15	23	16		
F-16C Aviano				7	28	29	26	29	1			
F-16C Hill			2	29	25	20	24	20				
F-16C Kunsan				23	21	16	19	21	20			
F-16C Misawa				31	22	23	20	23	1			
F-16C Moody					1	22	16	19	14			
F-16C Nellis												
F-16C Osan			15	17	18	20	11	22	17			
F-16C Shaw					24	28	22	28	18			
F-16C Spangdahlem				10	39	34	32	4	1			
	Below 0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**Above 100**
TOTAL	38	29	49	200	370	486	473	415	267	25	0	0

TABLE E-3. Number of Flying Hours Sorted by Average Monthly Low Temperature (deg F)

	Below 0	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Above 100
F-15C Mt Home				27466	37604	21584	22339	9311				
F-15C Elmendorf	4702	12454	21947	20435	15618	20634	22505					
F-15C Eglin					2488	27819	38703	27086	40704			
F-15C Langley				4223	39813	36682	34836	46092	23764			
F-15C Tyndall						27279	30631	25893	46507			
F-15C Kadena							30539	49206	51752	9114		
F-15C Nellis					4832	7403	6250	5852	7012	1802		
F-15C Lakenheath					7871	28896	22761	8470				
F-15C Spangdahlem				1690	5501	5086	4608					
F-15E Seymour				1023	30379	36698	35482	41356	22772			
F-15E Elmendorf	2078	5480	12352	11117	8292	11664	12269					
F-15E Mt Home				16849	20849	11894	11197	4810				
F-15E Lakenheath					21048	65694	50549	22177				
F-15E Nellis					3911	5846	4683	3928	5597	1532		
F-16C Eielson	30834	15778	9717	13839	12887	17114	18114					
F-16C Mt Home				13166	19313	10798	11959	4339				
F-16C Cannon				19701	42560	25504	30893	40877				
F-16C Luke					4377	80788	62044	34847	55092	37974		
F-16C Aviano				11459	32568	27929	31723	33820	808			
F-16C Hill			3239	36275	39266	30107	38161	29924				
F-16C Kunsan				19296	20245	16259	18028	19770	19568			
F-16C Misawa				27440	20741	23117	18888	22509	1172			
F-16C Moody						19458	11353	13953	9229			
F-16C Nellis					14419	23042	19866	16640	23007	6558		
F-16C Osan			8634	11763	10184	13152	6196	12378	9894			
F-16C Shaw					45289	60936	49473	54717	34924			
F-16C Spangdahlem				8748	38450	41149	31876	2810	582			
	Below 0	**0-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**90-100**	**Above 100**
TOTAL	37614	33712	55889	244490	498505	696532	675926	530765	352384	56980	0	0

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